

EXHIBIT 88



A Survey of Costs of
Dispensing Prescriptions
And Estimated Acquisition Cost
In the State of Kentucky

Prepared for the
Commonwealth of Kentucky
Department for Medicaid Services
Division of Administration and Development
Cabinet for Health Services

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TABLE OF CONTENTS

SURVEY OF COSTS OF DISPENSING PRESCRIPTIONS	<u>Page</u>
I. EXECUTIVE SUMMARY	1
II. OVERVIEW	
A. Introduction	4
B. Historical Background	4
C. Economical and Efficient Dispensing	4
D. Overview of Study Methodology	5
E. Findings	7
F. Analysis and Conclusions	8
III. SURVEY OF DISPENSING COSTS	
A. Methodology of Survey	9
B. Field Examination Procedures	11
C. Cost Finding Procedures	11
D. Analysis	16
E. Communication of Findings	19
IV. SURVEY OF ESTIMATED ACQUISITION COSTS	
A. Methodology	21
B. Findings	21
V. ANALYTICAL REPORT	
A. Schedule A	24
B. Schedule D	26
C. Schedule F	27
D. Schedule G	27
E. Schedule H	28
EXHIBITS	29
TABLES	

A C K N O W L E D G E M E N T S

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STUDY OF THE COST OF ECONOMICALLY AND EFFICIENTLY DISPENSING PRESCRIPTION MEDICATIONS IN THE STATE OF KENTUCKY

I. EXECUTIVE SUMMARY

Under contract to the Kentucky Department for Medicaid Services, Myers and Stauffer has completed a study of the cost of economically and efficiently dispensing prescription medications in the State of Kentucky. Components of this study included:

- A pharmacy dispensing cost survey;
- A study of estimated acquisition costs for drugs (pharmacy cost of goods);
- An analysis of third-party reimbursement rates for prescription medications; and
- An analysis of the statutes and regulations governing the practice of pharmacy in Kentucky.

The dispensing cost study was conducted using a cost reporting survey instrument similar to instruments used by us in over twenty previous studies in more than a dozen states. Five hundred Kentucky pharmacies were surveyed; 154 filed usable cost reports. All filed cost reports were subjected to extensive desk review procedures. Twenty pharmacies were selected for on-site field examination. Drug acquisition costs were measured by comparing actual acquisition cost data shown on invoices obtained from a sample of 14 independent and chain Kentucky pharmacies to standardized "average wholesale price" (AWP) pricing data. For drugs with a federal upper limit, actual acquisition costs were also compared to the federal "MAC." Drug acquisition cost comparisons were performed for the 400 drug products most commonly used by Kentucky Medicaid recipients.

The significant findings of the study are as follows:

- **No association was found between dispensing cost and unit-dose packaging or other measures of long term care dispensing activity; i.e., ambulatory and long term care pharmacies had similar average costs of dispensing.**
- Pharmacies dispensing intravenous (IV) solutions had dispensing costs per prescription that were at least 20% higher on average than other pharmacies. The costs associated with IV services were found not to be representative of the costs that are incurred by most retail pharmacies dispensing to outpatient and long term care facility patients.

- One-quarter of all Medicaid prescriptions were filled by pharmacies with an average dispensing cost of \$3.83¹ or less (excluding IV service providers). By definition, pharmacies in the first quartile are more efficiently operated than those providers with higher costs. The first quartile includes a mix of urban and rural providers and chain and non-chain stores. Although high volume was generally correlated with lower costs and efficiency; there were several moderately sized pharmacies (30,000 - 40,000 total prescriptions/year) represented in this first quartile. In summary, no external characteristics were identified that would prevent the majority of pharmacies in the Commonwealth from operating with a level of efficiency that would result in dispensing costs of \$3.83 or less per prescription. The statewide median cost of dispensing, weighted by Medicaid volume and excluding IV providers, was \$4.37.
- Actual drug acquisition costs were under the Commonwealth's current ingredient cost allowance of AWP less 10%. Excluding drugs with a federal MAC, actual acquisition cost for most drugs ranged between 80% and 86% of AWP. When weighted by Medicaid volume, the cost for all drugs, excluding MAC drugs, was 80.8% of AWP (or AWP less 19.2%). Acquisition costs for MAC drugs exhibited much greater variation, but averaged to be 28% of AWP, equivalent to 64% of the weighted average MAC prices for each drug. Our study showed very few drugs being purchased directly from manufacturers.

Summary

Kentucky's current Medicaid dispensing fee allowance is \$4.75 for ambulatory patients and \$5.75 for nursing facility patients; the state reimburses drug cost-of-goods at "average wholesale price" (AWP) less 10%. This was found to be significantly higher than the typical reimbursements offered by HMOs, PBMs, and other non-governmental third parties (median dispensing fee of \$2.50, and cost of goods at AWP less 10% to 12%). Although the results of our cost studies indicate that an efficient pharmacy provider can "break-even," even at these aggressive third-party arrangements, other factors (e.g., the reduced likelihood that Medicaid traffic will generate profitable non-pharmacy sales) make it less likely that a Medicaid agency can achieve the same deep discounts. Our findings suggest that the optimum level of reimbursement for pharmacy services is somewhere in between these third-party rates and the current Medicaid formula.

The professional fee and ingredient cost components of the pharmacy reimbursement formula should be assessed in conjunction. The Commonwealth's ingredient cost allowance of AWP less 10% *can* result in a margin of \$3.00 relative to actual acquisition costs on the typical Medicaid prescription costing about \$30. (In practice, many prescriptions are reimbursed at pharmacy usual and customary charges, in cases where these charges are lower than the maximum fee

¹All dispensing costs have been inflated to the midpoint of state fiscal year 1998. Dispensing costs reported here do not include the Commonwealth's \$0.25 tax per prescription, which is levied against the combined payment for the pharmacy professional fee and the cost of goods.

allowed by the formula.) Thus, the average Kentucky pharmacy could continue to fill Medicaid prescriptions at a profit, even with a modest reduction in the dispensing fee.

II. OVERVIEW

A. Introduction

This report is submitted by Myers and Stauffer, Chartered, Certified Public Accountants, 4123 SW Gage Center Drive, Topeka, Kansas, in accordance with the specifications contained in our contract with the Kentucky Department for Medicaid Services dated July 1, 1997. As part of this engagement, we previously issued a report, dated January 1998, that contained a review and analysis of third-party reimbursement rates for prescription medications, as well an analysis of the statutes and regulations governing the practice of pharmacy in Kentucky. The purpose of the present report is to review the procedures followed in conducting the estimated acquisition cost and pharmacy cost survey and analysis, to communicate findings, and to state conclusions based upon these findings. Numerous supporting documents are included with this report. In general, schedules refer to computer printouts, tables refer to summary data (usually of certain schedules), and exhibits refer to other supporting documents.

B. Historical Background

The motivating factor for this study of the cost of economically and efficiently dispensing medications to Medicaid recipients is Kentucky KRS 205.561, which requires that the Department produce an annual report on this subject, to be submitted to the governor and the Legislative Research Commission. Federal regulations at 42 CFR 447.331 through 447.333 also state that agencies must establish a reasonable dispensing fee. Dispensing cost studies such as the one documented herein have been acknowledged by the federal Health Care Financing Administration (HCFA) as an appropriate basis for the establishment of a Medicaid dispensing fee.

C. Economical and Efficient Dispensing

Kentucky's current dispensing fee allowance is \$4.75 for ambulatory patients and \$5.75 for nursing facility patients; the state reimburses drug cost-of-goods at "average wholesale price" (AWP) less 10%. In our January 1998 study of third-party pharmacy reimbursement rates, we found that the median dispensing fee offered by a large sample (over 300) of indemnity plans, pharmacy benefit managers (PBMs), and health maintenance organizations (HMOs) was \$2.50 for brand drugs and \$2.60 for generics. Many factors affect the costs to pharmacies of dispensing medications, and these factors may vary between a commercial and a Medicaid population. However, the prevalence of low third-party payment rates suggests that some pharmacies can economically dispense prescription drugs for less than the current Kentucky reimbursement rate.

An efficient and economical dispensing fee depends on three factors: the average costs of a pharmacist, the marginal costs of a pharmacist, and the relative bargaining power of the contracting parties. Average costs simply equal total costs divided by total volume. Marginal costs equal the change in costs associated with a change in volume. Marginal costs will be lower than average costs for pharmacists because many costs (e.g., leases and insurance) do not depend on volume. Relative bargaining power determines the size of the markup over marginal and average cost that the fee represents.

D. Overview of Study Methodology

Dispensing Cost Study

Survey forms were mailed to 500 in-state pharmacy providers enrolled in the Kentucky Medicaid program on August 16, 1997. Of the 500 pharmacies surveyed, 154 filed usable cost reports. All filed cost reports were subjected to extensive desk review procedures. Twenty pharmacies were selected for on-site field examination. No significant trend in overstating or understating costs was discovered during these examinations (Exhibit 8). Therefore, as a result of these findings, no adjustment to the cost basis of those pharmacies which were not subject to field examination was made. Based upon our experience in conducting approximately 600 field examinations during the past twenty years, we conclude the difference of understating or overstating costs is not only insignificant, but also appears to randomly vary from one trend to the other.

Cost surveys collected information on all direct and overhead costs incurred in pharmacy operation, including costs associated with both prescription and non-prescription activities. The costs attributable to Kentucky's \$0.25 tax on each prescription dispensed were removed from our analysis. Reported costs were then allocated to the prescription function using a variety of direct and statistical allocations, as appropriate to each cost category. The labor costs of employee pharmacists (and owner pharmacists) were allocated between prescription and non-prescription functions based on individual distribution of time spent as reported on the cost surveys, using a methodology recognizing that the economic productivity of pharmacists is greater when performing prescription duties.

Additional procedures were applied to labor costs reported for owner pharmacists, where significant potential exists for overstatement relative to the value of work performed. Utilizing labor cost data for non-owner pharmacists, we developed a regression equation which generates an upper limit for the owner-pharmacist's labor, based on the volume of prescriptions dispensed. A further limit on owner's compensation was set at the median salary and benefit cost for full-time employee pharmacists in non-chain stores. For those owner pharmacists who draw less than a fair market salary, our regression model functions to provide a lower limit for the reported labor cost.

After the application of allocation procedures and limits, each pharmacy's labor and overhead cost per prescription was calculated and then inflated to a common point, the midpoint of State

Fiscal Year 1998, December 31, 1997 (Exhibit 11). Statistical analyses were performed to identify the factors which might contribute to the variation between costs among pharmacies and relate to the determination of the cost of economically and efficiently dispensing prescription medications to Medicaid recipients in Kentucky.

Acquisition Cost Study

To conduct our study of the estimated acquisition cost of drugs, we identified a sample of 34 Kentucky pharmacies that had participated in the dispensing cost survey (excluding those that had been included in the field review sample), and requested that these pharmacies copy and submit all of their invoices for drug purchases for a specified month in 1997. Of the 34 selected pharmacies, the requested invoice data was received from 14. Invoice data was entered into a computerized database, and edited for consistency in units and package size. Edited invoice data was then merged with a drug pricing file with AWP amounts and Kentucky Medicaid volume information that was prepared by the Department's fiscal agent, Unisys Corporation. The data from Unisys identified the Medicaid agency's top 200 brand and generic drug NDCs (a total of 400 NDC items) by annual prescriptions reimbursed.

Tables were produced comparing actual purchase price to AWP for the identified sample of 400 drug products. The comparison of actual purchase price to AWP was summarized by responding pharmacy and in the aggregate. Our review of this acquisition cost data and data we were collecting for a similar study in another state at the same time showed that prices charged by wholesalers to pharmacies exhibit little variation, indicating that our sample of 14 is an adequate basis for making valid findings.

It is our belief that the results of the acquisition cost study can overstate true drug acquisition costs for some pharmacies due to availability of manufacturer rebates for **high volume** purchasers. These rebate amounts are not captured on the wholesaler invoices we collected and reviewed, nor are they reflected as offsets to cost in the dispensing survey.

E. Findings

The following table summarizes the findings of our dispensing cost study:

Inflated Dispensing Cost¹ for Kentucky Pharmacies

	All	IV Therapy Providers	All Other	Excluding IV Therapy	
				Unit Dose	Non-Unit Dose
Number	154	12	142	60	82
Unweighted Mean	5.24	6.28	5.16	5.03	5.24
Weighted Median ²	4.54	6.22	4.31	4.30	4.36
25 th Percentile ²	3.94	5.60	3.83	3.92	3.81

¹Excluding \$0.25 state tax.

²Weighted by Medicaid volume.

Our analysis indicates that the costs associated with dispensing intravenous (IV) solutions are not representative of the costs that are incurred by most retail pharmacies dispensing to outpatient and long term care facility patients. Excluding the pharmacies with an IV therapy focus, the median cost of dispensing a Medicaid prescription in Kentucky is \$4.62 (\$4.37 plus the \$0.25 state tax). This is inclusive of both ambulatory and long term pharmacies, and is less than the State's current dispensing fee allowance of \$4.75 for ambulatory patients and \$5.75 for long term care facility dispensing.

As shown in the above table, a significant result of this study is the finding that there is apparently no cost differential associated with dispensing prescriptions in unit dose packaging, nor were there cost differentials associated with other measures of long term care dispensing activity (see Exhibit 17-C). Another pharmacy characteristic found to be unrelated to cost per dispensing was chain versus non-chain affiliation status.

The study did disclose that dispensing of intravenous (IV) solutions was associated with increased costs, relative to the more "normal" ambulatory and nursing home dispensing activities. In the case of pharmacies with a focus on IV services, additional compensation is received for the home nursing services required to administer the IV solutions, and therefore the dispensing fee may be a less important component of overall Medicaid reimbursement.

We found that Kentucky pharmacies, excluding those with IV therapy sales, had average dispensing costs ranging from \$2.61 per prescription to \$12.02 per prescription. One-quarter of all Medicaid prescriptions were filled by pharmacies with an average dispensing cost of \$3.83 or

less. By definition, pharmacies in the first quartile are more efficiently operated than those providers with higher costs. In this first quartile can be found a mix of urban and rural providers and chain and non-chain stores. High volume was found to be correlated with lower costs and efficiency; however, there were several moderately sized pharmacies (30,000 - 40,000 total prescriptions/year) represented in this first quartile.

Estimated Acquisition Cost Findings

Pharmacy acquisition costs for all drugs, excluding drugs with a federal "Maximum Acquisition Cost" (MAC) were found to range from 14% of AWP to 93% of AWP; however, most drugs were purchased between 80% and 86% of AWP. When weighted for Medicaid volume, the cost for all drugs, excluding MAC drugs, was 80.8% of AWP (or AWP less 19.2%).

Acquisition costs for MAC drugs ranged from 3% to 86% of AWP, with the average being 27.4% of AWP. The weighted average acquisition cost for MAC drugs was found to be 64% of the MAC price (and 28% of AWP). The ratio of actual acquisition cost to the MAC price exhibited wide variation between drug products, with several in the 20% and 30% range.

For state fiscal year 1997, the average cost of goods allowance on a Kentucky Medicaid prescription was \$28.49². Given that the average margin between the Department's cost of goods allowance and actual acquisition cost is 11.6%, pharmacies have the opportunity to realize on average a margin of \$3.30 on the cost of goods reimbursement for each script. However, it appears that many Kentucky Medicaid prescriptions are reimbursed for less than the dispensing fee plus the standard cost of goods allowance, which we assume is the result of usual and customary charges being lower than the state's allowed amount.

F. Analysis and Conclusions

This study has determined that the weighted median cost of Medicaid dispensing, excluding IV providers, is \$4.37 (\$4.62 including the tax), and further that many presumed economical and efficient pharmacies are able to fill a prescription for \$3.83 or less (plus \$0.25 tax). The results of the acquisition cost study indicate that at the State's current reimbursement formula allows pharmacy providers an excess cost of goods reimbursement of \$3.30 on the typical Medicaid prescription, which can conceptually be applied as an offset to dispensing cost. These factors together suggest that an economically and efficiently operated pharmacy could dispense Medicaid prescriptions for a dispensing fee of under \$3.00, given the state's current cost-of-goods reimbursement formula. This is not to say that Kentucky pharmacists are currently making excessive profits from the current reimbursement formula, since many prescriptions are reimbursed at a usual and customary charge amount which is less than the cost of goods formula plus dispensing fee allows.

²Calculated using the MAC price or AWP less 10%, as appropriate, multiplied by the number of units dispensed.

III. SURVEY OF DISPENSING COSTS

A. Methodology of Survey

Survey Population

The Kentucky Department of Human Services provided us with a list of pharmacy providers which included paid claims data for each provider for the fiscal year ending June 30, 1997. From this list, a random sample of 500 pharmacies were selected to receive a cost survey. Of the 500 pharmacies receiving cost survey, 312 were independent pharmacies and 188 were chain pharmacies.

Mailing Procedures

Survey forms were mailed to 500 in-state pharmacy providers currently enrolled in the Medicaid program on August 1, 1997. Each pharmacy received one copy of the cost report, a list of instructions, a letter of explanation from this firm (Exhibit 1), a letter of introduction from the State of Kentucky (Exhibit 3), and a business reply envelope. The survey materials along with a slightly different cover letter were mailed to the various chain headquarters (Exhibit 1).

Survey Participation

Of the 500 surveyed pharmacies, 13 pharmacies were determined to be ineligible to participate. They were ineligible because they had closed, had a change of ownership, or had less than six months of data available. Therefore, the final number of pharmacies eligible to file was 487.

Numerous efforts to encourage maximum participation were made by various parties concerned with the success of the survey. An official letter (Exhibit 3) explaining the purpose of the study was sent to the sampled pharmacy providers by the Kentucky Department for Medicaid Services. The cost report forms and instructions as well as our letter of explanation offered pharmacy owners the option of having us complete certain sections of the survey form by sending in copies of their financial statements and/or tax returns. A telephone number was listed on the survey form urging pharmacists to telephone collect to resolve any questions they had concerning completion of the survey form. These and other efforts made to encourage participation are summarized in Exhibit 2.

By the original filing deadline of August 20, 1997, 20 cost reports had been received. All pharmacies that had not responded by that deadline were sent a letter extending the original deadline to September 15, 1997 (Exhibit 4).

By September 15, 1997, 88 pharmacies had submitted cost surveys. In order to maximize the response rate, additional cost reports were accepted until November 17, 1997. By this final deadline, surveys for 155 pharmacies were received. A majority of the original reports contained errors on a variety of items. The costs included on one survey were so extremely different than the other surveys that the survey was not included in our tabulations. The excluded survey was submitted by a pharmacy that provides IV therapies only. This pharmacy's reported average cost

per prescription was in excess of \$100, which, while obviously not representative of the general practice of pharmacy in Kentucky, is consistent with our findings regarding increased cost associated with IV services. In addition, we were unable to confirm all of the data reported by this pharmacy, despite the fact that we visited it for a field exam. This type of pharmacy often considers a prescription as one therapy which may last many days so there are no refills associated with this type of dispensing.

The number of pharmacies filing complete and usable cost reports was 154 out of a total of 487 eligible to file. This results in an overall response rate of 32 percent. Of these 154 reports, 95 were individual stores and 59 were chain stores. Pharmacy compliance with the survey was voluntary and a response rate of 32 percent is within the range anticipated by our firm based upon previous experience.

Data regarding technical tests of possible bias is presented below. We believe it is unlikely that either the responding or the nonresponding pharmacies had any knowledge as to whether the costs, as we define them, of their particular pharmacy operations are either high or low. Therefore, we consider it unlikely there is any intentional bias within the responding sample. The readers of this report can evaluate this point for themselves after reviewing the complex cost finding section.

Since the response of the surveyed pharmacies was less than 100 percent, the possibility of bias in the responding sample should be considered. To obtain a general idea of the bias, two tests were performed. The first was a Chi Square (χ^2) test for independence. This test was used to determine whether samples (filers versus nonfilers) were independent with respect to chains versus independents (including chains with less than 5 pharmacies). Throughout this report, the term independent pharmacies will include chains with less than 5 individual pharmacies.

Sample data indicates that 59 pharmacies representing six chains (or 31 percent) of the chains eligible to file, did file, while 95 (or 24 percent) of the independents eligible to file, did file usable cost reports. The null hypothesis is: the decision to file is independent of belonging to a chain organization. The alternative hypothesis is: the decision to file is not independent of belonging to a chain organization. As a result of the χ^2 test, the null hypothesis cannot be rejected at the five percent level of significance. Therefore, we conclude that the decision to file is independent of belonging to a chain organization.

In addition, the results of our study indicate that pharmacy size (volume of annual prescriptions) is an important predictor of cost. We performed a *t*-test to examine whether there was any bias between filers and no-filers on the Medicaid volume measurement (since the total volume statistic is not available for non-filing pharmacies). This test showed that the average annual Medicaid prescription volume for filers was 8,356 and for non-filers was 8,350. Using the standard deviations of the two samples, we calculated the *t*-statistic for this difference of means as 0.01, indicating that the two groups may be considered statistically similar in terms of size.

Receipt and Review Procedures

Each pharmacy was randomly assigned a four-digit identification number. Upon receipt, each cost report was recorded as received and then carefully examined. This review identified cost reports considered incomplete, and pharmacies submitting these cost reports were sent a "Request for Additional Information" form specifying the information necessary for completion (Exhibit 5). Those pharmacies not responding to our request for additional information within two weeks were sent a second request for additional information. Pharmacies not responding to this second request for additional information were contacted by telephone.

B. Field Examination Procedures

Twenty of the 487 pharmacies eligible to file cost reports were selected for field examination. The selection was primarily random, but geographic location and unit dose dispensing were taken into consideration to ensure examination of representative pharmacies. A letter (Exhibit 6) was sent to each selected pharmacy explaining the selection process, the time period during which the field examination would take place, and the necessary data to have available. Each pharmacy was then contacted by telephone for further explanation of the field examination and confirmation of the time and date. An examination file was prepared for each of the 20 pharmacies containing a uniform field examination program (Exhibit 7), a copy of the completed, reviewed cost survey, and other necessary workpapers. Field examinations were conducted during the period October 27 through October 31, 1997. Some of the cities in which field examinations were conducted are Jamestown, Clarkson, Bowling Green, Glasgow, London, Louisville, Manfordville, Taylorville, Williamsburg, and Manchester.

Following the actual visit to the pharmacy, the accountant completed his workpapers by making a second examination of each file to ensure that all necessary information had been obtained. The workpaper file was then carefully reviewed by the project manager. Results of the 20 field examinations showed no significant trend in overstating or understating costs reported on the cost survey (Exhibit 8).

C. Cost Finding Procedures

The basic analytical rationale used is that of full costing. Under full costing, all costs associated with a particular operation are summed to find the total cost. In general, this is the same rationale used for income tax purposes and is consistent with generally accepted accounting principles. Cost finding is the recasting of cost data through the use of rules or formulas in order to accomplish an objective. In this case, the objective was to estimate the cost of dispensing prescriptions. The cost finding rules are described in the next several paragraphs.

Overhead Costs

Overhead cost per prescription was calculated by summing the allocated overhead of each pharmacy and dividing this sum by the number of prescriptions dispensed. The overhead expenses as originally reported for the entire pharmacy were allocated to the prescription department on the basis of either the sales ratio, area ratio, all (100%), or none.

The overhead costs that were considered entirely prescription-related include prescription department fees, dues and publications, prescription delivery expense, prescription computer expense, prescription containers and labels, out-of-date drugs, and certain other expenses that were separately identified. All of these costs were considered to be incurred solely for the dispensing of prescriptions. Expenses reported on Lines 27-29 of the cost survey that were considered entirely prescription-related were transferred to Line 28. One example of an entirely prescription-related expense is continuing professional education for a pharmacist.

Overhead costs that were not allocated as a prescription expense include income taxes, bad debts, advertising, and contributions. Income taxes are not considered to be an operational cost because they are based upon the profit of the pharmacy operation. Also, it would be difficult for partnerships and sole proprietorships to determine income taxes paid on behalf of pharmacy operations. Although a separate line was provided for the state income taxes of corporate filers, it was not allowed as a prescription cost in order to afford equal treatment to each pharmacy, regardless of the type of ownership.

Bad debts were not considered a prescription-related expense since they are revenue offsets arising through an accrual recognition of revenues which are later found to be uncollectible. Disallowing this expense also afforded equal treatment to providers, irrespective of their method of accounting.

Individual proprietors and partners are not allowed to deduct contributions as a business expense for federal income tax purposes. Any contributions made by their business are deducted along with personal contributions as itemized deductions. However, corporations are allowed to deduct contributions as a business expense for federal income tax purposes. Thus, while Line 19 on the cost report recorded the business contributions of a corporation, none of these costs were allocated as a prescription expense. This, again, afforded equal treatment for each type of ownership.

At this point, we also removed the \$.25 provider tax expense, as not all pharmacies reported these costs on the cost report. Certain costs reported on Lines 27, 28, and 29 were excluded by deleting them from the data. These adjustments were made infrequently. An example is freight expense, which usually relates only to nonprescription purchases or cost of goods sold.

The preceding paragraphs dealt with classifications of overhead expenses that were assumed to relate either completely or not at all to prescriptions. The remainder of the costs were assumed to

be joint costs, that is, costs relating to both prescription and nonprescription sales. Joint cost allocation is an area of accounting that is difficult to justify purely on a theoretical basis. However, allocating no joint costs would clearly underestimate the cost of filling a prescription. On the other hand, allocating all joint costs to prescriptions would overstate the cost of filling a prescription.

Those overhead costs that were allocated on the ratio of the floor space in the prescription department to the floor space in the total pharmacy include depreciation, real estate taxes, rent, repairs, and utilities. The costs in these categories were considered to be a function of floor space. For example, the larger the facility, the higher the rent, if other factors are considered equal. The floor space ratio was increased by 50 percent from that reported on the original cost report to allow for waiting area for patients and prescription department office area. The resulting ratio was then limited to the sales ratio to avoid allocating 100% of these costs in the rare instance where the prescription department occupies the majority of the area of the store.

Other overhead costs include personal property taxes, other taxes, insurance, interest, accounting and legal fees, telephone and supplies. These costs were allocated on the ratio of prescription sales to total store sales. The sales ratio was utilized due to the lack of any other reasonable alternative.

Labor Cost

Labor cost is calculated by allocating total salaries, payroll taxes, and benefits on the basis of the percent of time spent in the prescription department. The allocations for each labor category were summed and the sum was divided by the number of prescriptions dispensed to calculate labor cost per prescription. There are various classifications of salaries and wages requested on the cost report (Lines 31-44) due to the different cost treatment given to each labor classification.

The total salaries, payroll taxes, and benefits of employee pharmacists (Lines 34-38) were multiplied by a factor based upon the percent of prescription time. Although some employee pharmacists spent a portion of their time performing nonprescription duties, it was assumed that their economic productivity when performing nonprescription functions was less than their productivity when performing prescription duties. Therefore, a higher percentage of salaries, payroll taxes, and benefits was allocated to prescription labor costs than would have been if a simple percent of time allocation was utilized. Specifically, the percent of prescription time indicated was multiplied by two and divided by the percent of prescription time plus one. As an example, consider a cost report showing an employee pharmacist who spends 90 percent of his time in the prescription department. The 90 percent factor would be modified to 95 percent $[(2)(.9) / (1 + .9)]$, and 95 percent of the reported salaries, payroll taxes, and benefits would be allocated to the prescription department. It should be noted that most employee pharmacists spent 100 percent of their time in the prescription department.

The allocation of salaries, payroll taxes, and benefits of the owner pharmacists (Lines 31-33) was based upon the same modified percentage of prescription time as used for employee pharmacists. However, limitations were placed upon the allocated salaries, payroll taxes, and benefits of owner pharmacists. Since amounts shown for owner pharmacists are not historical costs that have arisen as a result of arm's length negotiations, they are not similar to the other costs shown on the cost report. For example, an owner of a pharmacy would have a different attitude toward utility expense than toward his own salary. He would certainly consider it an adverse trend to have utility expenses increasing but would not consider it unfavorable for his own salary to be increasing. On the other hand, owner pharmacists who take an active part in the operation of the pharmacy do, of course, provide productive input to the operation of the pharmacy. If they were not working as owner pharmacists, they would have to employ other pharmacists to accomplish the functions they were performing.

Another factor considered in determining the allocation of owner's salaries was the variability in productivity of owner pharmacists. For example, one owner pharmacist may dispense 30,000 prescriptions per year while another may dispense 5,000. Those owner pharmacists who dispensed a greater number of prescriptions were allowed a higher salary than were owner pharmacists who dispensed a smaller number of prescriptions. Since variance is not nearly as great with respect to employee pharmacists, the owner pharmacist's salary was subjected to limits based upon employee pharmacists' salaries per prescription. The number of prescriptions filled by the owner pharmacist was determined by multiplying the percent of owner-filled prescriptions (Lines 31-33 of the cost report) by the total number of prescriptions dispensed (Line j).

A bivariate plot is a statistical technique used to identify a predictive equation and indicates the correlation between one (predictor) independent variable and one (predicted) dependent variable. The upper and lower limits on owner pharmacist salaries were determined from a bivariate regression plot (Exhibit 17-D). Employee pharmacists' salaries per prescription were used as a basis for setting limitations on the owner pharmacist's salary because 1) the salary established for an employee pharmacist re-presents an arm's length transaction, and 2) the productivity of employee pharmacists does not vary as much as the productivity of owner pharmacists. Since the number of prescriptions dispensed allows an improved prediction of employee pharmacists salaries and provides a basis for distinguishing between varying owner productivity, prescriptions dispensed served as a factor in determining owner salary allowances.

On Exhibit 17-D the vertical axis represents employee pharmacists' salaries and the horizontal axis represents the number of prescriptions dispensed by employee pharmacists. The resulting regression equation to predict pharmacist labor cost per prescription was \$2.077 times number of prescriptions dispensed plus \$2,990. This equation was used as a floor (lower limit) for allocating owner pharmacist costs. The standard deviation of this equation, \$10,453, was added to the equation to obtain an upper limit for owner pharmacists' salaries. An owner pharmacist's

salary was additionally limited to a \$73,000 maximum³, regardless of the number of prescriptions filled. Taking these factors into consideration, the amount of owner's salary allocated to prescription costs was limited to \$2.077 times the number of owner prescriptions dispensed plus \$13,443, not to exceed \$73,000.

For example, if an owner pharmacist dispensed 15,000 prescriptions, a maximum salary of \$44,598 ($\$2.077 \times 15,000 + 13,443$) and a minimum salary of \$34,145 ($\$2.077 \times 15,000 + 2,990$) would be allowed. The procedure followed was first to adjust the total salary, payroll taxes, and benefits indicated on the cost report utilizing the same modified percentage of prescription time factor as used with employee pharmacist salaries. If the resulting amount was in the range between the upper and lower limits, this adjusted salary was allowed as a prescription expense. If not, the upper or lower limit, as appropriate, was used as the owner's salary. See Exhibit 9 for the algebraic algorithm of the calculation of prescription labor.

In summary, all of the above computations were intended to produce a reasonable estimate of the cost that would have been incurred had an employee been hired to perform the prescription-related functions actually performed by the owner.

No adjustment was made to the percentage of prescription time factor for owner nonpharmacists (Lines 31-33). There is no reason to believe that either the managerial or clerical functions performed by the owner nonpharmacists were more valuable with respect to the prescription department than for nonprescription duties. As with the owner pharmacists, the amount shown for salaries, payroll taxes, and benefits was not a result of arm's length negotiations. Therefore, an upper limit of \$20,000 and a lower limit of \$10,000 were placed upon these prescription costs. These limits were chosen based upon the contractor's experience in prior surveys.

The allocation of salaries, payroll taxes, and benefits for all other prescription employees (Lines 39-43) was based directly upon the percentage of time spent in the prescription department as indicated on the individual cost report. For example, if the reported percentage of prescription time was 75 percent and total salaries were \$10,000, then the allocated prescription cost would be \$7,500.

None of the salaries, payroll taxes, and benefits of the other employees indicated on Line 44 were allocated as prescription costs because the expenses recorded on this line were defined in the instructions as payments to employees who did not perform any prescription-related duties.

An overall constraint was placed on the percentage of total reported labor that could be allocated as prescription labor. This constraint was developed recognizing that timekeeping records rarely exist in a pharmacy operation to account for prescription as opposed to nonprescription time. The constraint assumes that a functional relationship exists between the percentage of allocated

³The upper limit was set at the median salary and benefit cost for employee pharmacists filling 30,000 to 50,000 scripts annually.

prescription labor to total labor and the percentage of prescription sales to total sales. It is also assumed that a higher input of labor costs is necessary to generate prescription sales than nonprescription sales. At the same time, it is recognized that a pharmacy with 10 percent prescription sales should not require 50 percent of total labor to generate those sales. The parameters of the percentage of applied labor constraint are based upon an examination of data submitted by all pharmacies. These parameters are set at a level such that any resulting cost adjustment affects only those pharmacies with a percentage of prescription labor deemed to be unreasonable. An example of a case where the constraint would apply would be an operation that reported 75 percent pharmacy sales and 100 percent pharmacy labor. Obviously, some labor must be devoted to generating the 25 percent nonprescription sales. To determine the maximum percentage of total labor allowed, the following calculation was made: $[(0.3) \text{ (sales ratio)}] / [0.1 + [(0.2) \text{ (sales ratio)}]]$. Details of the percentage of applied labor constraint are shown in Exhibit 10.

Inflation Factors

All allocated costs for overhead and labor were totaled and multiplied by an inflation factor. Inflation factors are intended to reflect cost changes from the middle of the reporting period of a particular pharmacy to the midpoint of state fiscal year 1998; i.e., December 31, 1997. The midpoint and terminal month indices used were taken from the U. S. Government Consumer Price Index. See Exhibit 11.

It should be pointed out that, due to the timing of the survey, historical costs have been projected for approximately 20 months. The average pharmacy reporting a October 31, 1991 fiscal year would have their costs adjusted from April 30, 1996 to December 31, 1997. Due to changes in pharmacy operations and other factors, it should be recognized that inflationary adjustments to historical costs are valid for a limited time.

Our prior experience indicates a fairly high correlation exists between the overall CPI Index and changes in pharmacy dispensing costs which provides justification for using this index. It also shows that pharmacy operations are unique among major health care providers in that their dispensing costs are not rising any faster than the overall Consumer Price Index. There appears to exist a fairly firm control of overhead costs even when operating under a cost-related reimbursement system such as Medicaid. A possible reason for this occurrence is that the majority of prescriptions are dispensed in a competitive setting.

D. Analysis

In response to the objectives of the survey, an analysis was conducted to determine any correlation between pharmacy cost (dependent variables) and services or other traits of the pharmacy (independent variables). The analysis of the impact of certain traits was specified in our proposal. These traits were: prescription sales volume, prescription sales ratio, type of

location, total floor space, unit dose delivery systems, delivery service, parenteral medication (intravenous) services, level and percent of Medicaid volume, type of ownership, pharmacy building ownership, geographic location, and type of affiliation. The relationships between these traits and others (Exhibit 12) were analyzed through the use of a stepwise linear regression program.

Multiple regression is a statistical technique which is used to identify a predictive equation for specified dependent variables. With this technique, it is hoped that a small subset of the predictor (independent) variables will account for a sufficient portion of the variability in the dependent variable so as to make prediction relatively easy as well as accurate. In this particular regression, a predictor set of 29 variables was tested to determine a predictive equation for each of 20 dependent variables (Exhibit 12). Major emphasis was placed upon inflated total prescription costs and inflated total cost per prescription.

The task of identifying these equations was undertaken in two steps. The first step involved identifying a tentative predictive equation and then examining the sample data for potential errors. The second step involved taking the corrected data sample and identifying the best predictive equation for each dependent variable.

The SPSS/PC+ software system was the statistical program utilized in determining the predictive equations. The various statistical techniques used for analyzing the data were stepwise regression, bivariate plotting, and correlation matrix.

(1) Checking for Potential Errors

Errors in the data obscure the true relationship among variables. Of course, in a sample the magnitude of the present one, there is considerable room for errors to occur. To the extent these errors are small, then one can probably assume their effects will be immaterial. If they are large, however, they may be of sufficient consequence to affect some of the parameters of the regression equation.

An attempt was made to identify large errors by first performing a stepwise multiple regression analysis for two dependent variables, total cost per prescription and total prescription costs. Stepwise regression selects variables on the basis of which variable accounts for the most remaining variability in the dependent variable. That is, the first variable selected accounts for the most variance, then the second variable selected accounts for the most remaining variance, and so forth until either all variance is accounted for or the remaining predictors make only negligible contributions. Significance of contribution is determined by an F-test on the variance accounted for by each predictor.

Once the predictive equations were derived, they were used to obtain predicted values for the dependent measures. These predicted values were compared with actual values and the amount of deviation was noted. Those cases which deviated more than two standard error units were

then checked for accuracy. While this method certainly will not identify all errors, it did help to identify the major ones.

(2) Predictive Equations as a Basis for Fees

By definition, the mean of the predicted costs of the regression equation will be equal to the unadjusted mean of the costs of the individual pharmacies.

It should be observed that the predictive equation will be a reliable predictor of costs only if adopted as specified in Schedule F. Combinations of variables cannot be selected from several sources and still be expected to result in a reliable predictive equation. The coefficients associated with each of the predictor variables do not necessarily have a causal relationship to costs; they are correlated with cost and perhaps indicative of some other underlying trait. Although one can use intuitive logic in assessing the coefficients of many of the predictor variables, the equation should be looked upon only as a combination of variables that best predicts costs. This is an important point to bear in mind in assessing the regression results. Consider the following example.

Assume the following simplified formula resulted from Step 1 in a stepwise regression.

$$\text{TCRX} = \$3.00 - (.02) \text{ (Rx volume in 1,000's)}$$

Now, further assume there is only one large hospital pharmacy in the sample, and this pharmacy dispenses 250,000 prescriptions per year and has a cost of \$1.00 per prescription. The predicted cost at this step for the hospital pharmacy would be:

$$\$3.00 - (.02)(250) = \$ -2.00$$

The reason that negative costs would be predicted is that the linearity assumption is not valid for extreme cases.

Assume further that, at Step 2, the next variable to enter is a variable designating the hospital pharmacy and that the resulting formula is:

$$\text{TCRX} = \$3.30 - (.05) \text{ (Rx volume in 1,000's)} + (10.20) \text{ (H.P.)}$$

The predicted cost would be:

$$\text{TCRX} = \$3.30 - (.05)(250) + (10.20)(1) = \$1.00$$

The coefficient of \$10.20 for hospital pharmacies is not an indication that hospital pharmacies have costs \$10.20 higher than other pharmacies. It is instead an adjustment to the predictive equation based upon an interrelationship with the other variables in the equation.

E. Communication of Findings

The results of the cost analysis are contained in the various schedules, tables, and exhibits included within this report. The standard mean (unweighted), mean weighted by total prescriptions, and the mean weighted by Medicaid prescriptions are shown at the bottom of most tables.

Much of the data collected is summarized in Tables 1 through 10. These tables summarize various means and/or percentiles. The means of labor, overhead, and total cost per prescription for all reporting pharmacies weighted by the total number of prescriptions dispensed were \$3.46, \$1.43, and \$4.89, respectively, inflated through December 31, 1997 (Table 2). The median total cost per prescription, inflated through December 31, 1997 and weighted by total number of prescriptions was \$4.55.

The responding pharmacies were categorized into various groups that might be of interest. For example, the weighted mean of total cost per prescription for pharmacies with prescription volume of 20,000 to 30,000 was \$6.19 while the weighted mean of total cost per prescription for pharmacies with prescription volume over 40,000 was \$4.69 (Table 3). The unweighted median for pharmacies with prescription volume of 20,000 to 30,000 was \$5.95 while the unweighted median of pharmacies with prescription volume over 40,000 was \$4.48. The question of whether the classifications represent significant differences in cost can be partially answered through reference to the results of the regression analysis.

Our analysis indicates that the costs associated with dispensing intravenous (IV) solutions are not representative of the costs that are incurred by most retail pharmacies dispensing to outpatient and long term care facility patients. Excluding the pharmacies with an IV therapy focus, the median cost of dispensing a prescription in Kentucky is \$4.62 (\$4.37 plus the \$0.25 state provider tax). This is inclusive of both ambulatory and long term care pharmacies, and is less than the State's current dispensing fee allowance of \$4.75 for ambulatory patients and \$5.75 for long term care facility dispensing.

As previously stated, an analysis was conducted to determine correlations between pharmacy cost and certain pharmacy traits. The traits specified in the proposal that were determined to be significantly correlated with inflated total cost per prescription were prescription volume, medicaid volume, percent of prescriptions delivered, and IV therapy dispensing. See Table 4-A.

A significant result of this study is the finding that there is apparently no cost differential associated with dispensing prescriptions in unit dose packaging, nor were there cost differentials associated with other measures of long term care dispensing activity (see Exhibit 17-C and Table 4-A). During our field examinations we observed and discussed with providers the questions stated in RFP Section F.3. Even though the providers mentioned specific costs for unit dose and home infusion dispensing, the only cost differential we observed was with the home infusion

(IV) therapy dispensing. The more costly items specified by the providers were the hoods, clean rooms, and pumps associated with IV therapy dispensing. One pharmacy mentioned software used for nursing home charting. Often a pharmacy is reimbursed by the long term care facility for reviewing charts and other LTC consulting services.

Another pharmacy characteristic found to be unrelated to cost per prescription was chain versus non-chain affiliation status.

Summarized results of the stepwise regression analysis are shown in Tables 4-A through 4-B. Bivariate plots for certain dependent and independent variables are shown in Exhibits 17-A through 17-J. All results of the regression analyses are detailed in Schedule F.

IV. SURVEY OF ACQUISITION COSTS

A. Methodology

The Department provided a list of the top 200 brand name and the top 200 generic drugs ranked by total prescriptions reimbursed for the fiscal year ending June 30, 1997. This listing included the AWP (average wholesale price) and MAC (federal upper limit price), if applicable, for the sample months, annual number of prescriptions reimbursed, annual units of each drug reimbursed, and annual dollars reimbursed for the fiscal year ended June 30, 1997.

We randomly selected 34 pharmacies to participate in the acquisition cost survey. The Department sent a letter to the selected pharmacies requesting them to copy drug purchase invoices covering a one-month period. One half of the pharmacies were asked to send invoices from May 1997 and the other half, from November 1997. The pharmacy providers were requested to submit invoices for drug purchases from both wholesalers and manufacturers. Not all providers submitted invoices for direct purchases from manufacturers. However, it is not known whether no direct purchases were made during the sample month, whether the provider does not purchase directly from manufacturers, or whether the provider simply forgot to submit them.

Invoices were received from 14 pharmacies, three of which were chains. There was no significant difference between the acquisition cost of drugs for chains and independents shown by the invoice data. However, based on our experience and discussions with various chain organizations and the larger independent pharmacies, some of these organizations receive rebates on their drug purchases; however, no rebates were noted on the invoices received.

The drug purchase date on the invoices was entered into our database. Drug name, strength, package size, number of units purchased, extended price paid, and NDC number, if available, from the invoices was entered into our database. The drugs were then computer matched by NDC number to the listing of 400 drugs provided by the state of Kentucky. As many invoices did not reflect NDC numbers, our staff matched the remaining invoice drugs by description. Many drugs did not match the EAC drug listing because of differing package size or drug strength.

Schedule H, "Kentucky EAC Discounts" is a listing of all invoice drugs which were included on the state's drug EAC list. After the unit Actual Acquisition Cost (AAC) of each drug was calculated, AAC as a percent of the AWP used for Kentucky reimbursement rate was calculated. The following means of these percents were calculated: (1) all drugs, (2) drugs purchased from wholesalers, and (3) drugs purchased direct from manufacturers (Table 10). The three means were calculated for all drug purchases combined and for each pharmacy.

B. Findings

The invoice drug purchases were separated into categories of wholesale and direct purchases as these two groups have distinct characteristics. The mean discount from AWP for all non-MAC drugs purchased from wholesalers was 19.9% and the mean discount from AWP for all non-MAC drugs purchased was 20.0%. Weighted by Medicaid utilization, the mean discount is 19.2%. One reimbursement method to consider would be to base reimbursement on the mean wholesale discount as the responding providers primarily purchased their drugs from wholesalers. This purchase method is consistent with previous surveys we have conducted.

The direct purchase discount for non-MAC drugs was similar for most of the drugs purchased from direct manufacturers, but differed somewhat from drugs purchased from wholesalers. There were only 29 direct purchases out of approximately 2,275 purchases of non-MAC drugs included on the state's EAC listing.

The data does not show that any drugs were purchased primarily from drug manufacturers on a direct price basis. Although we received several manufacturer invoices from the majority of responding pharmacy providers; the providers may not have sent all their invoices for the sample months.

We have calculated the actual acquisition cost of multi-source drugs for which there is a MAC price as a percentage of AWP and as a percentage of MAC prices. The average discount from AWP for these multi-source drugs is 72.6%. The average discount from MAC prices is 36.6% for all multi-sources drugs for which there is a MAC price. There is a wide variation in drug acquisition cost as a percent of MAC prices between various drugs; therefore we do not recommend a reimbursement based on a percent of MAC pricing.

Table 10 is a percentile listing of the individual store means of drugs purchased wholesale. There was no significant differences due to chain affiliation or urban location.

There are various other alternatives available to the Department for drug ingredient cost reimbursement.

1. One alternative is to base reimbursement at the cost of the most commonly purchased package size for each drug. An example would be a product that is available in 36-capsule, 100-capsule, 500-capsule and 1,000-capsule package sizes. The Department could select the cost of a specific package size and reimburse at its unit cost for any package size submitted. The selection could be based on the most frequently purchased package size for each drug. In this manner, the length and cost of maintenance of the Department's drug formulary could be greatly reduced. We did not analyze whether the majority of a certain drug was purchased in a particular sample size; however, the data we have collected may support that premise.

2. The state currently reimburses certain generic drugs using federal upper limit prices, generally called MAC prices. An alternative methodology for reimbursing these drugs

would be to reimburse these drugs at the lower of MAC prices or at AWP minus a percent, similar to non-MAC drugs. The purchase data collected shows that providers purchase MAC drugs from wholesalers, on the average, at a discount of 72.6% from AWP. However, the discounts range from a low of approximately 20% to a high of 97%. The lower discounts appear to be brand-name multi-source drug purchases.

3. Another alternative is to reimburse drugs at WAC (wholesale acquisition cost) plus a percentage. As the WAC for all 400 drugs in the sample was not available, we have calculated it only for those drugs for which the WAC was available. Based on discussions with First DataBank, the WAC is available for about forty percent of all drugs; however, it appears that it is available for most of the widely prescribed drugs.

V. ANALYTICAL REPORT

A. Schedule A

Exhibit 15 is an example of Schedule A. This schedule is sent to each participating pharmacy and shows the pharmacy's calculated cost per prescription.

Each report is identified by a randomly assigned number, located in the upper left corner of the schedule. The next column indicates the fiscal year end of the pharmacy. Fiscal years ended on or before March 31, 1997. The next column contains the pharmacy's total prescription volume for the fiscal year of the survey. The next three columns of the report give the unadjusted cost per prescription for overhead, labor, and total cost. Overhead, labor, and total cost per prescription adjusted for inflation are printed below the unadjusted costs.

The expense statement shows the line items and the related original costs that were reported on the cost report. Costs were allocated by one of the following ratios: all (100%), sales, or area. The codes representing these ratios are A, B, and C, respectively. Prescription container and label expense is coded by the letter H. See Exhibit 16 for further explanation of these codes. Most expense items not allocated (e.g., corporate state income tax) were simply omitted from the schedule.

The amounts used in the calculations for the sales and area ratios are located at the top of each Schedule A. The sales ratio is the ratio of prescription sales to total sales. The area ratio is the product of 1.5 times prescription area divided by total store area, not to exceed the sales ratio. The area for the prescription department was increased by 50 percent to allow for patient waiting and office area. For an example of the allocation of a line item, refer to Exhibit 15, Schedule A, Line 5, Depreciation. The original costs were \$8,382. Depreciation costs as originally reported were allocated by Code C which is the ratio shown under the "FACTOR" column as .323. The allocated cost is \$2,707 which is printed under the column entitled "ALLOC RX COST." Following Line 29 is the total of these allocated costs, "TOTAL ALLOCATED RX OVERHEAD," which is used to calculate overhead cost per prescription.

Lines 45-49 relate to the allocation of labor in which each line represents different categories of employees or owners. This section shows the total salaries and benefits, allocation codes, percent of prescriptions dispensed by the pharmacists, the percent of each employee's time spent in prescription-related duties, and allocated labor. The source of this data is Lines 31-44 of the cost report. Exhibit 16 gives an explanation of the codes.

The allocated salaries or drawings for owner pharmacists, Line 45, are computed using the adjusted percent of prescription time and then subjecting the resultant amount to the upper and lower limits of $\$2.077 \times (\text{owner Rxs}) + \$2,990$ and $\$2.077 \times (\text{owner Rxs}) + \$13,443$.

respectively. These calculations are coded by the letter "D." For example, on Exhibit 15, an owner pharmacist spent 81 percent of his time in prescription-related duties and filled 40 percent of the total prescriptions dispensed. The 81 percent factor has been modified to 89 percent, and the reported salary of \$64,238 has been lowered to the upper limit of \$51,094 (Line 45). The original salary of \$64,238 was multiplied by 89% and then subjected to the upper limit of \$2.077 multiplied by the number of prescriptions filled by the owner (\$2.077 x .40 (45,319) plus \$10,443.

The allocation of Employee Pharmacists' salaries, Line 46, is coded by the letter "G." This allocation was made by multiplying the reported salary by the adjusted percent of prescription time. For example, two employee pharmacists spent 100% of their time in prescription-related duties. As shown on Exhibit 15, the 100% factor was modified to 100% and \$52,468 is the allocation of the original salaries of \$52,468. Exhibit 15 also shows that the employee pharmacists filled 60% of the total prescriptions dispensed.

The Owner Non-licensed Pharmacist salary, Line 47, is coded by the letter "E." The percent of prescription time is not modified for purposes of computing allocated salaries or drawings for owner nonpharmacists. Upper and lower salary limits for owner nonpharmacists were \$20,000 and \$10,000 per year, respectively, subject to an adjustment for full-time equivalency. In the case of Exhibit 15, the owner non-pharmacist's salary of \$2,905 was first multiplied by 100%, resulting in \$2,905. The lower salary limit was calculated by multiplying .25 (full time equivalency factor) times \$10,000 (lower limit) times 100% (percent of prescription time) or \$2,500. The upper limit would be .25 (1.00) (\$20,000) or \$5,000. The \$2,905 of allocated salaries, payroll taxes and benefits falls between those limits, and, therefore, was not adjusted by the limits.

Line 48, Other Prescription Department Employees, is coded by the letter "F." This indicates an allocation of the originally reported salaries, payroll taxes, and benefits on the basis of percent of prescription time. For example, Exhibit 15 shows the percent of prescription time reported as 83% and total salaries as \$47,144. Therefore, the allocation for prescription costs is \$38,894.

Since Line 49, All Other Employees, represents those employees who spend no time in the prescription department, none of the \$9,609 in total salaries, payroll taxes, and benefits shown on Exhibit 15 is allocated for prescription cost purposes.

Listed below Line 49 is the sales adjustment for labor. This adjustment was calculated as follows: $[(0.3) \text{ (sales ratio)} / [0.1 + (0.2) \text{ sales ratio}]]$. For example, the pharmacy represented on Exhibit 15 had preallocated salaries of \$169,534 (see Exhibit 9 for the algorithm for preallocated labor) and a sales ratio of .915. The sales ratio as modified by the above formula was then multiplied by the preallocated salaries (.970 x \$169,534 = \$164,447). Since this product was more than the total allocated salaries, the sum of Lines 45-49, an adjustment to total allocated salaries was not necessary.

B. Schedule D

Schedule D consists of arrays of certain costs and other data taken from individual Schedule A's and is, therefore, a summarization of all individual cost reports. The first column indicates the randomly assigned number of the individual pharmacy. The next three columns are overhead, labor, and total cost per prescription before inflation adjustments. The following three columns are overhead, labor, and total cost per prescription after adjusting for inflation to December 31, 1997.

The data in Schedule D is arrayed in various sequences. For example, the first sequence is in descending order from the highest to the lowest inflated total cost per prescription. Another sequence is in descending order based upon adjusted overhead cost per prescription. Cases of extreme high and low costs per prescription represent unusual circumstances such as pharmacies that have very low or very high prescription volume. However, these pharmacies have little effect on average costs per prescription. These sequential arrays are convenient for locating probable errors in data and for determining costs at various percentiles. Schedule D is also presented in various other sequences such as adjusted total cost per prescription and total prescription volume. The sequence order is shown immediately above the column headings on the left side of Schedule D printouts.

The 10th to 90th percentiles are indicated on each Schedule D on the right side of the printout. On the last page of each sequence, various means are calculated. First, the unweighted means are calculated. Second, the means are weighted by the total number of prescriptions dispensed and, finally, the means are weighted by the Medicaid prescriptions dispensed. The total number of Medicaid prescriptions utilized was taken from the Department's payment records for the fiscal year ending June 30, 1997. The last page of the schedule also indicates total prescription volume for the number of pharmacies included in the calculation of averages. Also shown are the standard deviation and variance of the unadjusted mean.

Adjusted overhead, labor, and total cost per prescription include data from 154 pharmacies. See Table 2 for a summary of this data. Table 5 is a summary of unadjusted total cost per prescription.

The information in Schedule D is also sorted by various categories such as ownership, affiliation and prescription volume. Tables 3, 6, and 7, summarize the means and percentiles of these variables. An examination of these schedules points to cost differences for the various classifications. It should be noted at this point that cost differences observed in these schedules may not be statistically significant. For example, a Schedule D report printed in descending order by total cost is provided for individual ownerships and partnerships and for corporations. Individually owned and partnership pharmacies are included on the same Schedule D as there was only a total of 10 pharmacy providers in the combined category.

C. Schedule F

Schedule F details the results of the regression analysis performed on 29 independent and 20 dependent variables listed in Exhibit 15. Schedule F is divided into three sections.

The first section contains bivariate plots. Twenty dependent variables are plotted against several independent variables.

The second section is the correlation matrix. The coefficients (numbers) in the matrix show the mutual relationship between each variable and every other variable.

The third section is the stepwise regression analysis. All the variables requested in the Department's Invitation for Bid and additional variables chosen based on our experience in other states were forced into the regression. For nine dependent variables, a regression equation is obtained which contains the mix of independent variables which best predict the dependent variables.

D. Schedule G

Schedule G is an array of the cost of containers per prescription. The first column in Schedule G is the randomly assigned number of the cost report, the second is the total prescriptions dispensed by the pharmacy, and the third is the total container costs reported by the pharmacy. Column four represents the container cost per prescription. The sequence of the individual pharmacy data on Schedule G is determined by container cost per prescription. These costs are arrayed in descending order.

It should be noted that only those pharmacies which had fairly complete information with respect to the actual cost of containers and labels were requested to complete Line 26, Rx Containers and Labels. Schedule G was an attempt to gather information on the cost of containers per prescription. It was anticipated that most pharmacists did not accumulate this information. Typically, the cost of containers is included in an organization's cost of goods sold.

Of the 154 pharmacies filing individual usable cost reports, 70 submitted data on container cost and, of these, many were unable to provide reliable data. For example, it is relatively certain that the cost of containers per prescription is in excess of \$0.01. Many figures in the array of Schedule G probably indicate a situation where only a portion of the container costs were accounted for separately and entered on Line 26. Since this array contains much inaccurate data, it was concluded the array of container costs should not be relied upon.

Therefore, data was gathered from an alternative source. The results are contained in Exhibit 14. This alternative estimate is based upon containers for both liquid and dry prescriptions. Within each of these classifications, the percentage of utilization of each container size is multiplied by the average wholesale price for that container size. These calculations result in a weighted

average cost of containers for dry and liquid prescriptions. By further multiplying these weighted average costs by the relative frequency of dry and liquid prescriptions, an overall weighted average cost per container was calculated. This amount is \$.167 per prescription.

The percentage of utilization shown in Exhibit 14 was estimated by our consultant pharmacist.

E. Schedule H

Column 1 shows the assigned number of the pharmacy. Column 2 is the NDC number from the EAC drug list for the drug listed in Column 3. Column 3 is the description of the drug from the invoice (if no NDC number was listed) or is the description from the EAC list. Column 4 is the package size in which the drug was purchased. Column 5 is the quantity of the drug purchased. Column 6 is the extended quantity of the drug purchased (package size times quantity of packages). Column 7 is the price paid for the drug as shown on the invoice. Column 8 is the calculated unit acquisition cost paid by the pharmacy for the drug. Column 9 is the unit estimated acquisition cost for the drug taken from the State's EAC drug list (AWP). Column 10 is the purchase date on the invoice. Column 11 shows an "x" for those drugs for which there is a federal upper limit (MAC) price. Column 12 shows an "x" or a "*" for those drugs that were purchased directly from manufacturers. Column 13 is calculated by dividing Column 8 by Column 9. This is the percent of the State's AWP (estimated acquisition cost) that the pharmacy paid for the drug.

At the end of the schedule the following means are calculated: 1) all the drugs included on the printout, 2) all the drugs included that were purchased wholesale, and 3) all the drugs included that were purchased directly from manufacturers. Also at the end of the schedule is the total number of drug purchases shown that are purchased 1) direct from manufacturers and 2) from wholesalers.

Schedule H was printed in two sequences: 1) alphabetic order for all drugs in the survey and 2) assigned number order.

KENTUCKY PHARMACIES

EXHIBITS

- Exhibit 1 Blank Reports and Instructions, Cover Letter (2- Independent/Chains)
- Exhibit 2 Efforts Promoting Participation
- Exhibit 3 Letter from Department
- Exhibit 4 Follow-up letter urging participation and extending the due date of the survey
- Exhibit 5 Request for Additional Information Form
- Exhibit 6 Field Examination Letter from Firm
- Exhibit 7 Field Examination Program
- Exhibit 8 Summary of Field Examination Findings
- Exhibit 9 Algorithm for Applied Rx Labor
- Exhibit 10 Percent of Allocated Labor Allowed Given a Sales Ratio
- Exhibit 11 Table of the Inflation Factors
- Exhibit 12 Listing of the Variables Used in the Stepwise Regression
- Exhibit 13
- Exhibit 14 Calculation of Container Cost Per Rx
- Exhibit 15 Schedule A - Example
- Exhibit 16 Explanation of Schedule A Allocation Codes
- Exhibit 17 Bivariate Plots
- Exhibit 18 Letter from Department requesting drug purchase invoices

Kentucky Pharmacy Cost Report

**Survey Forms by Myers and Stauffer LC
Certified Public Accountants
909 SW Topeka Boulevard
Topeka, Kansas 66612
800-255-2309**

Under Contract with the Kentucky Department of Medicaid Services

PURPOSE: The purpose of this survey is gather data to determine the cost of dispensing prescriptions in the State of Kentucky.

GENERAL INSTRUCTIONS

If any assistance is needed in completing this survey, please call toll-free (800) 255-2309. Please complete these forms using your most recent fiscal year ending on or before March 31, 1997 and return them by August 20, 1997. Most retail pharmacies can complete these survey forms by using their most recent federal income tax return. Most expense items requested can be transferred directly from a line on the tax return to a line on the cost report. Line reference numbers of four tax forms are listed on the left side of the report. Simply locate the column for your tax form. If you prefer, send us a copy of your income tax return (Form 1065, 1120, 1120S, or Schedule C of Form 1040 including supporting schedules) and we will complete the overhead expenses, Section IIB, Page 2 and Section IID, Page 3, for you. You will still need to complete Sections IA on page 1, IIA on page 2 and IIC on page 3. If you send a copy of your tax return, please identify any expenses that are 100% Rx-Department expenses such as continuing education, etc. By sending any of these tax forms, you will not be providing us with any information other than that requested if you completed the survey yourself. We will destroy the tax forms after entering the information on the survey. Please remember to round all amounts to the nearest dollar or whole number.

Pharmacies Exempt from Filing

If you are a new business or had a change of ownership recently, you must have had a fiscal year end and at least six months of data prior to the fiscal year end in order to submit a report. If you do not meet these criteria, please return the survey form indicating the date of opening or change of ownership of the pharmacy.

Retail Chain Pharmacies

Expenses incurred by chain pharmacies such as administration, central operating, or other general expenses should be allocated to individual units. Warehousing expenses must be either separately identified or included in cost of goods sold. Methods of allocation must be reasonable and conform to generally accepted accounting principles. Please explain any allocation procedures used. Allocated costs should be clearly labeled and entered on lines 27, 28 and/or 29.

SECTION IA — PHARMACY ATTRIBUTES

The information gathered from your answers to these questions will be analyzed to determine its relationship to your cost of dispensing a prescription. You may have to provide estimates for some answers: please estimate as carefully and accurately as possible.

Line (j) — "Prescriptions Dispensed." Please report the total number of all prescriptions filled during the fiscal year of the cost report. This information may be kept on a daily or monthly log or on your computer. If you keep no record of the number of prescriptions you fill, the amount may be estimated using the following method. (1) Often your Rx numbering system may be used to estimate new Rx's. Subtract the Rx number of the first prescription filled in your fiscal year from the Rx number of the last prescription filled. (2) Take a sample over several days showing the number of refill prescriptions and new prescriptions. Divide the number of refills by the number of new prescriptions in your sample. Multiply that amount times the number of new prescriptions determined in (1) above to estimate the number of refill prescriptions for your fiscal year.

Myers and Stauffer LC
For Assistance, Call Toll Free (800) 255-2309

Lines (31)-(33) — "Owners." All individual proprietors, partners, or stockholders should list their total drawings and/or salaries for the year. Do not show net profit for the owner's salary but **actual drawings or salary.** For purposes of this study, **an employee who is a stockholder in the pharmacy is considered an "Owner."** For those owners who took no salary or drawings, show zero to indicate you have not overlooked this line. A salary will be allocated based on time and/or prescriptions dispensed.

Lines (39)-(43) — Rx Technicians, nonprofessional, clerical, and delivery personnel who perform Rx-related duties should be listed.

Line (44) — "All Non-Rx Employees." List total salaries for all employees who spend **no time** in Rx-related duties.

SECTION IID — RECONCILIATION WITH BOOKS OR FEDERAL INCOME TAX RETURN

The purpose of this reconciliation is to ensure that all expenses have been listed and that none have been duplicated. For example, pharmacies operating as sole proprietors will normally need to list owner's salaries, drawings, and benefits as a reconciling item. Other examples of reconciling items are the 20% meals deduction included on your federal tax return, officers' life insurance, and other non-tax deductible expenses.

Agency Use Only

Kentucky Pharmacy Cost Report

Page 1
(7/97)

Survey Forms by Myers and Stauffer LC

Certified Public Accountants

909 SW Topeka Blvd.

Topeka, Kansas 66612

Under Contract with the Kentucky Department of Medical Services

ROUND ALL AMOUNTS TO NEAREST DOLLAR OR WHOLE NUMBER.

Please complete and return by August 20, 1997

Instructions are enclosed. Please call toll-free (800) 255-2309 if you are having difficulty completing this report.

Name of Pharmacy _____ Telephone No. (_____) _____

Street Address _____

City _____ County _____ State _____ Zip Code _____

DECLARATION BY OWNER AND PREPARER

I declare that I have examined this cost report including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, complete, and in agreement with the related Books or Federal Income Tax Return, except as explained in the Reconciliation. Declaration of preparer (other than owner) is based on all information of which preparer has any knowledge.

Your Signature	Print/Type Name	Title/Position	Date
----------------	-----------------	----------------	------

Preparer's Signature(other than owner)	Title/Position		Date
--	----------------	--	------

Preparer's Street Address	City and State	Zip	Phone Number
---------------------------	----------------	-----	--------------

SECTION IA—PHARMACY ATTRIBUTES

(a) Type of Ownership:

- | | |
|--------------------------------------|--|
| <input type="checkbox"/> Individual | <input type="checkbox"/> Corporation |
| <input type="checkbox"/> Partnership | <input type="checkbox"/> Other—Specify _____ |

(b) Check if you are located in a Medical Office Building.....

(c) Ownership Affiliation:

- | |
|--|
| <input type="checkbox"/> Independent (1-4 Units) |
| <input type="checkbox"/> Chain Unit (5-14 Units) |
| <input type="checkbox"/> Chain Unit (15 or More Units) |

(d) If you checked (c) 2 or 3 above, is the chain

- | |
|---|
| <input type="checkbox"/> State of Kentucky chain only |
| <input type="checkbox"/> National Chain |

(e) Do you dispense in anything other than traditional packaging?

- | |
|---|
| <input type="checkbox"/> Unit Dose |
| <input type="checkbox"/> Modified Unit Dose (Bingo Cards) |
| <input type="checkbox"/> No Unit Dose |

(f) If you checked box 1 or 2 of (e), what percent of the Unit dose prescription packaging is:

- | |
|---|
| <input type="checkbox"/> Purchased from manufacturers _____ |
| <input type="checkbox"/> Prepared in the pharmacy _____ |

(g) What is the approximate percent of your prescriptions dispensed to long-term care facilities?.....

- | |
|---|
| (h) Check if you own your building..... <input type="checkbox"/> |
| (i) What percent of total prescriptions filled are delivered?..... |
| (j) List the total number of all prescriptions dispensed during the fiscal year as follows:
New _____ Refill _____ Total _____
(See Instructions) |
| (k) Are you presently providing home IV or infusion therapies and/or enteral nutrition therapy?..... <input type="checkbox"/> Yes <input type="checkbox"/> No |
| (l) If (k) is yes, what is the amount of your sales for those Rx's?..... |
| (m) How many hours per week is your pharmacy open?..... |
| (n) What is the approximate percentage of the total number of prescriptions dispensed that is third party, including private pay and Medicaid RX?..... |
| (o) How many years has a pharmacy operated at this location?..... |

Section IB – OTHER INFORMATION

Please list any additional information you feel contributes significantly to your cost of filling a prescription. Also, if you have a significant amount of non-retail sales of drugs at cost, please note the amount and if it is included in line (1), column (1) on page 2.

ROUND ALL AMOUNTS TO NEAREST DOLLAR OR WHOLE NUMBER.

SECTION IIA – SALES AND FLOOR SPACE

	Prescription Drugs Only	Total Store Including Prescription Drugs	Line No.
Sales (Excluding Sales Tax).....	_____	_____	(1)
Cost of Goods Sold.....	_____	_____	(2)
Floor Space (Retail area only). Please measure. Do not estimate. _____ Sq. Ft. _____ Sq. Ft.			(3)

SECTION IIB – OVERHEAD EXPENSES

Complete this section by referring to the line numbers in the left columns which correspond to federal income tax return lines.

The following information is from tax/fiscal year ending _____ / _____ / _____ (4)

1996						Total Expense	Agency Use Only	Line No.
1040C	Tax Form Number	1040	1040A	1040S				
13	16a	20	14a	12	Depreciation (This fiscal year only – not accumulated).....	_____	_____	(5)
23	14	17	12		Taxes (a) Personal Property Taxes Paid.....	_____	_____	(6)
					(b) Real Estate Taxes.....	_____	_____	(7)
					(c) Payroll Taxes.....	_____	_____	(7a)
					(d) Sales Taxes.....	_____	_____	(7b)
					(e) State Income Tax (Corporations Only).....	_____	_____	(8)
					(f) Any other taxes, specify each type and amount.....	_____	_____	(9)
20	13	16	11		Rent (a) Building Rent (See Instructions)	_____	_____	(10)
					(b) Equipment and Other.....	_____	_____	(11)
21	11	14	9		Repairs.....	_____	_____	(12)
15	20	26	19		Insurance (a) Workers Compensation and Employee Medical.....	_____	_____	(13a)
					(b) Other.....	_____	_____	(13b)
16a&b	15	18	13		Interest.....	_____	_____	(14)
17	20	26	19		Legal and Professional Fees.....	_____	_____	(15)
27	20	26	19		Dues and Publications – Rx Department.....	_____	_____	(16)
27	20	26	19		– Other.....	_____	_____	(17)
9	12	15	10		Bad Debts (This fiscal year only – not accumulated).....	_____	_____	(18)
					Charitable Contributions (Corporations Only).....	_____	_____	(19)
26	20	26	19		Telephone.....	_____	_____	(20)
25	20	26	19		Heat, Water, Lights, and other Utilities (Sewer & Trash).....	_____	_____	(21)
13322	20	26	19		Operating and Office Supplies (Exclude Rx containers and labels).....	_____	_____	(22)
3	20	23	16		Advertising.....	_____	_____	(23)
27	20	26	19		Rx Computer Expenses (See Instructions).....	_____	_____	(24)
27	20	26	19		Rx Delivery Expenses (See Instructions).....	_____	_____	(25)
17	20	26	19		Rx Containers and Labels(See Instructions).....	_____	_____	(26)
Var	18+	24+	17+		Other Expenses not included elsewhere (attach schedule if necessary)....	_____	_____	(27)
	19+	25+	18+		Specify each item and corresponding amount.....	_____	_____	(28)
20	26	19				_____	_____	(29)
					Total Overhead Expenses [Add Line (5) through Line (29)].....	_____	_____	(30)

Survey Forms by Myers and Stauffer LC
Certified Public Accountants

Page 3
(7/97)

SECTION IIC —PERSONNEL COSTS—List each person separately (except Line 44). Attach schedule if necessary.

	<u>Owner's and Professional's Social Security Number</u>	<u>Check If RPh</u>	<u>Estimate Percent of Prescriptions Dispensed By Each RPh</u>	<u>Annual Salaries and/or Drawings</u>	<u>AGENCY USE ONLY</u>	<u>No. Weeks Employed This Fiscal Year</u>	<u>Average Weekly Hours</u>		<u>Line No.</u>
							<u>Total Store Including Rx Dept.</u>	<u>Rx Dept. Related Duties Only</u>	
Owners: Individual Proprietors, Partners, & Stockholders.....									(31)
									(32)
									(33)
Employee and Relief Pharmacists.....									(34)
									(35)
									(36)
									(37)
Interns.....									(38)
			Total: <u>100%</u>						(38a)
Other Employees with Time In Rx Dept. (Including Rx Delivery and Rx Technicians).....	XXX	XXXXXXXXXX							(39)
	XXX	XXXXXXXXXX							(40)
	XXX	XXXXXXXXXX							(41)
	XXX	XXXXXXXXXX							(42)
	XXX	XXXXXXXXXX							(43)
ALL NON-RX EMPLOYEES.....	XXX	XXXXXXXXXX				XXXXX	XXXXXX	XXXXXX	(44)
TOTALS.....									(45)

SECTION IID —RECONCILIATION WITH TAX RETURN (or Books if multistate operation)

	1996 TAX FORM NUMBER		Column 1		Column 2	
			Cost Report Amounts	Books or Tax Return Amounts		
100C	1105	1120	1120S			
28	21	27	20	Total Expenses per Tax Return/Books (Circle one used).....		(46)
				Enter Amount from Line (30).....		(47)
				Enter Amount from Line (45).....		(48)
				Total Expenses per this Cost Report [Add Lines (47) and (48)].....		(49)
				Specify Items with Amounts That Are on Cost Report But Not on Tax Return (or books).....		(50)
				Specify Items with Amounts That Are on Tax Return (or Books) But Not on This Cost Report.....		(51)
						(52)
						(53)
				Total [Add Lines (46) - (53)] Column Totals Should be Equal.....		(54)

SECTION IIIA

1. Please report below types and amounts of costs incurred by your pharmacy as a result of meeting the following laws, regulations, etc: regulations of the Cabinet for Health Services, Department of Public Health, Department for Medical Services; Kentucky State Board of Pharmacy; federal and state laws; and any federal or state requirements impacting the cost of doing business. Be specific, for example, Pharmacy License fee \$100.
-
-
-
-

2. Does the pharmacy receive payment from third party programs such as HMO's, PPO's, Pharmacy Benefit Management Groups, etc.? _____ Yes _____ No. If yes, do any of these programs provide reimbursement for non-legends/over-the-counter medications? _____ Yes _____ No. If yes, does coverage require that a prescription order be issued to the patient by their physician or otherwise authorized prescriber and that such prescription is maintained on file in compliance with all state and federal laws and regulations attendant with the provision of legend medications, or, may the patient obtain these items at their own discretion and does the providing pharmacy receive reimbursement from the respective third party program?
-

Is program coverage of non-legends/over-the-counter medications provided for all program beneficiaries or only those individuals residing in nursing homes?

For programs that do provide reimbursement for non-legends/over-the-counter medications please indicate the program name and categorize their reimbursement methodology as one of the following four examples indicated below. Of other reimbursement methodologies are used by any third party payor please indicate the respective program and method used. Also indicate if coverage is for all program eligibles or for nursing home residents only and if a prescription is, or is not required. Use a blank page if necessary.

- (1) MMM Usual and customary charge
 SSS Shelf price only paid - no dispensing fee
 - (2) AAA Shelf price + \$2.00 dispensing fee
 - (3) BCBS 3.50 dispensing fee + (AWP - 10%)
 - (4) XXX Do not pay for non-legends/ OTC products
-
-
-
-
-
-
-
-

3. As some pharmacies have lower than average costs, please provide the following information (you may enclose a copy of your balance sheet if you wish):
- a. If you own the pharmacy, please report the depreciated value of your building (the portion used by the pharmacy, if also rented out). _____
 - b. Prescription inventory at cost _____ and market, if different _____.
 - c. Notes payable _____
 - d. Mortgage payable _____
4. If your pharmacy has a room used only for patient counseling, what is the amount of square feet of that room? _____ Did you include that square feet on line 3, column 1 of Section IA? _____

Myers and Stauffer LC
Certified Public Accountants

909 SW Topeka Blvd.
Topeka, Kansas 66612-1696
(913) 232-3700
(800) 255-2309

August 1, 1997

TO: Kentucky Pharmacies

As part of the process of evaluating the Medicaid dispensing fee, the Kentucky Cabinet for Health Services, Department for Medicaid Services, has contracted with our firm to conduct a survey of costs of dispensing prescriptions in Kentucky. Based upon a random sample process, your pharmacy was selected to participate in the Kentucky pharmacy cost survey. We have conducted pharmacy cost surveys in thirteen other states and are looking forward to working with pharmacies in the state of Kentucky.

Enclosed are copies of the Kentucky Pharmacy Cost Report forms and instructions. We encourage you to read the instructions. Please submit the completed forms directly to us by August 20, 1997. If your tax return has not been completed for the 1996 fiscal year, please file a cost report using your prior year's tax return and the corresponding prescription data for that year. The data will be adjusted for inflation. Please retain a copy of the completed survey forms for your records.

For your convenience, we offer to complete a portion of the survey for you. You may send us a copy of your business federal income tax return (Forms 1065, 1120, 1120S, or Schedule C of Form 1040 and accompanying schedules). All tax returns will be used in strict confidence and destroyed after the data is entered. You will still need to complete the following cost report sections:

- 1) Page 1
- 2) Page 2 - Line 1, column 1 - prescription sales
Line 3, columns 1 and 2 - prescription area and total store area
- 3) Page 3 - Personnel Costs - Complete Lines 31 - 45, all columns
- 4) Page 4 - Section IIIA - Complete all applicable items

All information submitted on your report will be held in confidence. Each report will be assigned a 4-digit identification number to protect the confidentiality of ownership information. Access to this information will be limited to members of our firm.

It is very important that all pharmacies cooperate by filing an accurate cost report. Reports generated from this survey may be used as a basis for evaluating future professional fees paid under the Medicaid program. To encourage cooperation, each participating pharmacy will receive a computerized analysis of its costs incurred in filling a prescription.

If you have any questions, please call us toll free at 800-255-2309. Your cooperation in providing the information for this survey is greatly appreciated.

Sincerely,



Marilyn Cozad
Project Manager

EXHIBIT 2

KENTUCKY PHARMACIES

Efforts to Promote Participation

- An initial survey letter from the contractor and a letter from the Kentucky Department of Human Services included with the survey forms.
- A second letter from the contractor mailed to all pharmacies not responding by the original deadline.
- Letters to pharmacies requesting additional information on surveys requiring clarification to be usable.
- Second letters to those pharmacies not responding to the first letter requesting additional information.
- Pharmacies telephoned to obtain additional information on surveys submitted.

Exhibit 3



CABINET FOR HEALTH SERVICES
COMMONWEALTH OF KENTUCKY
FRANKFORT, 40621-0001

DEPARTMENT FOR MEDICAID SERVICES
"An Equal Opportunity Employer M/F/D"

July 28, 1997

Dear Pharmacy Provider:

The Department is required by state regulation to periodically survey pharmacy costs to determine an appropriate dispensing fee. The Department has selected the firm of Myers and Stauffer, Certified Public Accountants, to conduct the survey. Myers and Stauffer has extensive experience in performing pharmacy cost studies and analysis.

The survey is designed to measure all costs associated with dispensing prescriptions and will form a basis for reviewing the current dispensing fees. In order to ensure an accurate and valid measurement of dispensing costs, all forms need to be completed and returned, within the allotted time, to the firm of Myers and Stauffer. The contractor and the Department guarantee the confidentiality of the responses and no pharmacy will be given access to another pharmacy's data.

The ultimate success of this survey is dependent on the cooperation of those involved. The accuracy of survey results depends, to a great extent, on the number of completed surveys returned to the contractor. Should you have any questions about the survey, you may call Marilyn Cozad of Myers and Stauffer at 1-800-255-2309. Your cooperation in completing the survey and promptly returning it to the contractor is greatly appreciated.

Sincerely,

A handwritten signature in black ink, appearing to read "Duane Dringenburg".

Duane Dringenburg
Director
Division of Individual and Clinic Providers

DCD/ES/pm

Enclosure

Myers and Stauffer LC
Certified Public Accountants

909 SW Topeka Blvd.
Topeka, Kansas 66612-1696
(913) 232-3700
(800) 255-2309

August 26, 1997

To: Kentucky Pharmacies

Recently you received a Kentucky Pharmacy Cost Survey and a request that you complete and return it to us by August 20. If you have returned this survey, please accept our thanks for your participation. The number of responses we have received up to this time is, in our opinion, inadequate to constitute a valid survey. Therefore, if you have not yet completed the survey, please complete and return it to us by September 15, 1997.

This pharmacy cost study was initiated by the Kentucky Cabinet for Health Services, Department of Medicaid Services, for the purpose of determining costs of dispensing prescriptions. The survey is being conducted in accordance with state regulations. The fairness and objectivity of the final results of this cost survey are directly related to the degree of response of Kentucky pharmacies.

Let me again reassure you that the information you provide us will be kept confidential. Each survey will be assigned a 4-digit number to protect the confidentiality of ownership information. Access to this information will be limited to members of our firm.

If you are having difficulty completing the survey form, we will be happy to assist you in any way possible. Please telephone us at 1-800-255-2309 or write to the above address. Also, if you have not yet received the survey forms or have misplaced them, please telephone and we will be glad to send the forms to you.

Thank you for your cooperation and assistance.

Sincerely,



Marilyn Cozad
Project Manager

EXHIBIT 5**MYERS AND STAUFFER LC**

Certified Public Accountants
909 Topeka Avenue
Topeka, Kansas 66612

KENTUCKY PHARMACY COST STUDY
Under Contract with the Kentucky
Department of Medical Services
For Assistance Call Toll-Free (800) 255-2309

After a preliminary review of the cost report you recently submitted, we have a few questions that will clarify the information you provided. Please answer only the questions marked with a "check" and return this letter to us within one week. A postage paid envelope is enclosed. Thank you for your help and cooperation.

- 1. Please confirm or revise Line 1, column 1, page 2, and/or line(j), page 1. These two amounts indicate an average selling price per Rx of _____ which is higher than most Kentucky pharmacies.

- 2. Please confirm line (3), floor space. Please measure rather than estimate as these amounts are used to allocate expenses. Do not include office, waiting, or storage area in column 1. Do not include storage area in column 2.

- 3. Please provide separate amounts for the following taxes that are included in your total tax expense of ____; real estate tax _____, personal property tax _____, sales tax ____, payroll taxes _____, and other taxes _____.

- 4. Total utilities expense is _____. Please provide a separate amount for telephone expense: _____.

- 5. Lines 27, 28, 29. For each expense included in _____, please identify each expense and its corresponding amount.

- 6. Please complete/reconsider lines (31) - (38), "Percent of Prescriptions Dispensed." This should be the percentage of your total prescriptions that were dispensed by each RPh during the fiscal year of this report. The column total should be 100%. Per hour's shown, the pharmacist on lines _____ would each fill ____ percent of the Rx's.

- 7. Please complete/confirm lines (31) - (43), page 3, "Average Weekly Hours". Report your best estimate of the hours during a typical week that each employee worked in any department in the store, including Rx. Then list hours worked in Rx-related duties only. Non-Rx department hours must be sufficient to handle all duties involved with nonprescription sales.

- 8. Please complete line(s) _____.

9. Other _____.

10. Please complete/revise lines (31) - (44). These should total to _____ per the salaries shown on your financial statement/tax return. All non-Rx personnel salaries should be shown on line 44.
11. Please complete the reconciliation of the cost survey total expenses to total expenses shown on your tax return/books on page 3, Section IID. If your form of ownership is individual or partnership, the owner's drawings should be shown as a reconciling item.
12. Please confirm that the individual listed on line(s) _____ is not an owner or related to owners of this pharmacy.
13. Please confirm lines _____.
14. Please confirm or revise line(s) 31 - 34, column 4. The amount shown should be actual owner drawings and not net income. If incorrect, please provide actual owner drawings.
15. Please confirm line(s) _____. If a stockholder or related party owns the building, ownership costs must be reported rather than rent paid in this non-arms-length transaction. Such expenses could include depreciation, real estate taxes, repairs, insurance, etc.

Exhibit 6

Myers and Stauffer LC
Certified Public Accountants

909 SW Topeka Blvd.
Topeka, Kansas 66612-1696
(913) 232-3700
(800) 255-2309

October 15, 1997

Dear Pharmacy Owner/Manager:

In accordance with our contract with the state of Kentucky to conduct a survey of pharmacy cost data in Kentucky, we are randomly selecting pharmacies for field examination. Your pharmacy has been selected for such an examination. The purpose of the examination is to verify the accuracy of data submitted on the cost report. We hope to substantiate that the survey results provide a reliable basis for determining pharmacy dispensing fees.

The field examinations will be conducted within the pharmacy during the period from October 27 through October 31, 1997. The examination program has been designed so as to minimize any inconvenience to you. The records that will be needed during the examination are financial statements, tax returns, prescription records, and workpapers which were used in the preparation of your cost report.

A member of our staff will be contacting you by telephone to arrange the specific date and location of the examination. If you have any questions concerning the proposed field examination, please feel free to call us.

Sincerely,



Marilyn Cozad
Project Manager

MKC:lww

EXHIBIT 7**FIELD EXAMINATION PROGRAM FOR KENTUCKY PHARMACIES**

Pharmacy Name _____
 Pharmacy Address _____
 Survey Assigned No. _____

Work
Performed
by

NOTE TO FIELD EXAMINER: Workpapers should be keyed to the related examination step. The scope of each step is determined by the circumstances of the examination and instructions given by the project coordinator and/or project manager. Clearly indicate any unresolved issues on each step. Reread and clarify workpapers before turning in file.

1. ARRANGE EXAMINATION DATE

Contact the provider to determine an acceptable examination date. Records the provider should have include: 1) books and accounting records, and/or 2) tax return, 3) any worksheets used to prepare cost study, 4) prescription log sheets and files.

2. RECONCILIATION

Complete a worksheet reconciling total expenses, sales, and cost of goods sold per cost study to such items per books and/or tax return.

3. EXAMINATION OF EXPENSES

Trace in certain individual expense accounts to book or tax return and reconcile any differences. For chain stores determine how warehousing costs were handled on cost report as they should be part of cost of goods sold, and determine allocation procedures for central office costs.

4. ALLOCATIONS - Verify the following:

A. Trace Rx and total sales to books, tax return, or prescription log (may be computerized). If there is no record of prescription sales, take a sample of 20 prescriptions from 5 days during each of 3 months and obtain an average selling price. Multiply this average selling price by total number of prescriptions for the year. The sample should be from fiscal year of the cost report.

B. Floor space - MEASURE. DO NOT ESTIMATE.

C. Labor - Review for reasonableness and inquire about specific duties if necessary.

EXHIBIT 7

FIELD EXAMINATION PROGRAM FOR KENTUCKY PHARMACIES

Work
Performed b

Pharmacy Name _____

Pharmacy Address _____

Survey Assigned No. _____

5. Rx VOLUME

NOTE: Regarding patient confidentiality, some pharmacists may question our authority to see patient records. If so, the pharmacist may read the data from the prescription.

- A. Verify the number of Rx's through examination of Rx daily log sheets, Rx card files, or through computerized totals. If these are not available and prescriptions are in numerical order, subtract first prescription of year from the last prescription and estimate refills by taking a sample of two or more days each month. For each day determine the number of refills and calculate a ratio by comparing this amount to total prescriptions filled that day.

- B. Verify percent of prescriptions filled by owner pharmacist. A sample from the prescriptions file or a computerized listing may be used.

6. UNIT DOSE/INSTITUTIONAL DISPENSING

Complete Kentucky questionnaire regarding unit dose and institutional pharmacies.
Complete questions 2C for all pharmacies.

7. EXIT INTERVIEW

Summarize findings with pharmacist. Take time to answer any questions.

FIELD EXAMINATION PROGRAM FOR KENTUCKY PHARMACIES
INSTITUTIONAL PHARMACY QUESTIONNAIRE

Pharmacy Name _____

Pharmacy Address _____

Work
Performed
by

Survey Assigned No. _____

1. What percent of unit dose prescriptions are returned to the pharmacy? Do you give credit to Medicaid, any other third party, or to the patient for these returned

prescriptions? If so, to whom? If not, is administrative cost to the agency or pharmacy used as a determining factor when crediting or not crediting the purchasing entity? If not, what is the factor? Are there specific drugs that could be returned for credit? If so what are they?

2. Do the institutional pharmacies have adequate documentation to determine the following:

- A. Were the returned drugs destroyed? If not, what happened to them?
- B. Were the returned unit dose drugs credited to Medicaid prior to recharging Medicaid when they were re-dispensed?
- C. Is on site supervision adequate to insure non-pharmacists assisting in dispensing are visually observed at all times (both institutional and non-institutional pharmacies)? Or are all drugs dispensed looked over by the pharmacist before they leave the premises?
- D. Are different types of unit dose packaging used for institutional dispensing? If so, describe the types.
- E. Does the pharmacy serving a health care facility utilize a unit dose system which does not require repackaging?
- G. Which type of unit dose dispensing costs less to dispense, that purchased from a manufacturer or that made up in the pharmacy? Or does the cost depend on the type of drug or particular drug dispensed? Please explain.
- H. Does the "Bingo Packages" packaged medication require repackaging for use or reuse? If yes, please explain.
- I. What specific costs are incurred for home infusion patients and nursing facility patients? (E.g. tubing, special insurance, separate room, etc. for home infusion and unit dose costs for LTC). Obtain these costs.

EXHIBIT 7

FIELD EXAMINATION PROGRAM FOR KENTUCKY PHARMACIES

INSTITUTIONAL PHARMACY QUESTIONNAIRE

Pharmacy Name _____

Pharmacy Address _____

Work
Performed
by

Survey Assigned No. _____

- J. For nursing facility prescriptions, identify the costs of dispensing unit dose packaged drugs both when manufacturer-packaged and when pharmacy packaged. _____
- K. Is the blanket authorization process for drugs and medication in Nursing facilities cost effective? Identify from other payors reviewed, what mechanism is a more cost effective process, but which also protects the health and safety of the residents. _____
- L. Are blanket authorizations necessary under a fully automated pre-authorization process? _____

EXHIBIT 8

KENTUCKY PHARMACIES

Assigned Number	Exceptions and Comments	Summary of Field Examination Findings		Increase/ (Decrease)
		Original	Revised	
583	Sales ratio, area ratio	\$ 5.21	\$ 5.34	\$ 0.13
635	Various overhead allocations	10.09	10.06	(0.03)
1069	Sales ratio	3.85	3.81	(0.04)
1545	Area ratio	4.19	4.24	0.05
1910	Area ratio, various overhead allocations	6.22	6.17	(0.05)
2666	Area ratio	5.11	5.10	(0.01)
3363	Area ratio	5.61	5.65	0.04
4117	Various overhead allocations	4.34	4.72	(0.12)
4444	Sales ratio, area ratio, various overhead allocations	3.85	3.83	(0.02)
4925	Number of descriptions dispensed, Rx sales	4.16	4.15	(0.01)
5706	Various overhead expenses	4.23	4.33	0.10
6092	Various overhead allocations	5.38	5.34	(0.04)
6719	No change	6.65	6.65	0.00
7842	Number of prescriptions dispensed	6.06	6.22	0.16
7996	Sales ratio, area ratio, number of prescriptions dispensed, various labor, and overhead allocations	6.38	6.99	0.61
8044	Various labor allocations	3.58	3.88	0.30
8180	Various overhead allocations	5.79	5.79	0.00
9411	Various overhead allocations	4.29	4.44	0.15
9437	Various overhead allocations	5.54	5.42	(0.12)
9501	Various overhead allocations	8.64	8.48	(0.16)
Total net change				\$ 0.44

Total Net Change

Number of increases	7
Number of decreases	11
No Change	<u>2</u>
Total Examined	20
Average net change per pharmacy is	\$0.44 / 20 = \$0.02

EXHIBIT 9**(2 Pages)**

KENTUCKY PHARMACIES
Algorithm For Applied Rx Labor

Upper limit = \$2.077/Rx + 2,990 for line 45, \$20,000 for line 47

Lower limit = \$2.077/Rx + 13,443 for line 45, \$10,000 for line 47

$\%_R$ = Percent of time spent in the prescription department indicated in column 4 for lines 47-48 of Schedule A.

S_x = Total salaries, wages, payroll taxes, and benefits indicated in column 1, line x of Schedule A where $x \in \{45-48\}$.

F = The number of full time equivalent employees for line 47 of Schedule A.

$$\%_A = \frac{2(\%_R)}{1 + \%_R}$$

$\%_O$ = Percent of total prescriptions filled by the owner pharmacist(s) indicated in column 3, line 45 of Schedule A.

A_x = Allocated Rx cost for line x where $x \in \{45-48\}$.

RX = Number of prescriptions dispensed from line (n) of the individual cost reports.

TALC = Total Allocated Labor Cost

PAL = Pre-Allocated Labor

SR = Prescription sales divided by total sales.

$$\text{MSR} = \frac{\text{SR} (.3)}{.1 + \text{SR} (.2)} = \text{Modified Sales Ratio}$$

$$\text{PAL} = \frac{A_{45}}{\%_A} + \frac{A_{46}}{\%_A} + \frac{A_{47}}{\%_R} + \frac{A_{48}}{\%_R} + S_{49}$$

EXHIBIT 9

(2 Pages)

KENTUCKY PHARMACIES
Algorithm For Applied Rx Labor

Allocated Costs:

Line 45:

A = $(\%_A) (S)$ subject to:
 $(\%_A) (S) \geq (\$2,077) (Rx) (\%_O) + 2,990$
and $(\%_A) (S) \leq (\$2,077) (Rx) (\%_O) + 13,443$
and not to exceed \$73,000

Line 46:

A = $(\%_A) (S)$

Line 47:

A = $(\%_R) (S)$ subject to:
 $(\%_R) (S) \geq (\$10,000) (\%_R) (F)$
and $(\%_R) (S) \leq (\$20,000) (\%_R) (F)$

Line 48:

A = $(\%_R) (S)$

Total Allocated Labor Cost:

TALC = $A_{45} + A_{46} + A_{47} + A_{48}$ subject to:
 $A_{45} + A_{46} + A_{47} + A_{48} \leq \text{MSR (PAL)}$

EXHIBIT 10

KENTUCKY PHARMACIES
Percent of Allocated Labor Allowed
Given a Specified Rx Sales Ratio

<u>Rx Sales Ratio</u>	<u>Sales Ratio X 0.3 Divided by 0.1 Plus (Sales Ratio X 0.2)</u>
5%	13.6%
10%	25.0%
15%	34.6%
20%	42.9%
25%	50.0%
30%	56.3%
35%	61.8%
40%	66.7%
45%	71.1%
50%	75.0%
55%	78.6%
60%	81.8%
65%	84.8%
70%	87.5%
75%	90.0%
80%	92.3%
85%	94.4%
90%	96.4%
95%	98.3%
100%	100.0%

EXHIBIT 11**KENTUCKY PHARMACIES****Table of Inflation Factors***

Fiscal Year End	Midpoint Date	Midpoint Index	12/31/97 Terminal Month Index	Inflation Factor
9/30/97	3/31/97	160.0	161.3	1.008125
8/31/97	2/28/97	159.6	161.3	1.010652
7/31/97	1/31/97	159.1	161.3	1.013828
6/30/97	12/31/96	158.6	161.3	1.017024
5/31/97	11/30/96	158.6	161.3	1.017024
4/30/97	10/31/96	158.3	161.3	1.018951
3/31/97	9/30/96	157.8	161.3	1.02218
2/28/97	8/31/96	157.3	161.3	1.025429
1/31/97	7/31/96	157.0	161.3	1.027389
12/31/96	6/30/96	156.7	161.3	1.029355
11/30/96	5/31/96	156.6	161.3	1.030013
10/31/96	4/30/96	156.3	161.3	1.03199
9/30/96	3/31/96	155.7	161.3	1.035967
8/31/96	2/28/96	154.9	161.3	1.041317
7/31/96	1/31/96	154.4	161.3	1.044689
6/30/96	12/31/95	153.5	161.3	1.050814
5/31/96	11/30/95	153.6	161.3	1.05013

*Factors reflect changes from the middle of the reporting period to December 31, 1997

EXHIBIT 12**KENTUCKY PHARMACIES****Listing of the Variables Used in the Regression**Independent Variables

ASSIGN - Assigned number.

TOTSALES - Total sales reported by store.*

NONRXSAL - Nonprescription sales.

INDIV - Individual proprietorship.

PARTN - Partnership.

CORP - Corporation.

M0BLDG - Located in a Medical Office Building.

INDEP - Independent with 1 - 4 units.

OWN - Owns pharmacy building.

DELPER - Percentage of total prescriptions that were delivered.

TPN - Provides intravenous antibiotic therapy/total parenteral nutrition and/or enteral nutrition services.

HRSOPEN - Hours open per week.

PAR3PER - Percent of total prescriptions which are third party.

TOTRXVOL - Total prescriptions dispensed by pharmacy during its fiscal year.*

MEDVOL - Number of Medicaid prescriptions.

TOTAREA - Total store area.

SR - Prescription sales divided by total sales.

PEROWNRX - Percent of total prescriptions filled by owner pharmacists.

URBAN - Located in one of five urban Kentucky counties.

UNIDOS - Dispenses unit dose prescriptions.

MODUNDS - Dispenses modified unit dose (bingo card) prescriptions.

MEDPER - Percent of total prescriptions that are Medicaid.

NONMED - Total prescription volume minus Medicaid volume.*

RECIPMED - Reciprocal of Medicaid volume.

RXSALE - Prescription sales of a pharmacy for its fiscal year.

EMPRXS - Number of prescriptions filled by employee pharmacist.

MFR_UD - Percent of unit dose packaging purchased from manufacturers.

PROV_UD - Percent of unit dose packaging that is prepared in the pharmacy.

PERLTCRX - Percent of prescriptions dispensed to long term care facilities.

INTERVEN - Amount of IV therapy sales.

Dependent Variables

TCPERRX - Total cost per prescription.

INTCRX - Total inflated costs divided by the number of prescriptions.

OHPRRX - Overhead cost per prescription.

LABPRRX - Labor cost per prescription.

TOTLAB - Total labor costs allocated.*

TOTOH - Total overhead costs allocated.*

TOTEXP - Total prescription costs.

INTOTOH - Inflated total overhead costs allocated.*

INTOTLAB - Inflated total labor costs allocated.*

INOHRX - Inflated overhead cost per prescription.

INLABRX - Inflated labor cost per prescription.

INTRXC - Inflated total prescription costs.

SPPERRX - Prescription sales divided by total prescriptions.

GMPER - Sales minus cost of goods sold divided by sales.

UNALLOH - Overhead costs reported by pharmacy.

UNALLAB - Labor cost reported by pharmacy.

RXLLT - Allocated prescription labor divided by preallocated labor.

UNEMPLAB - Employee labor reported by pharmacy.

TOTEXP - Total expenses reported by pharmacy.

RXLST - Allocated prescription labor divided by total sales.

LTST - Preallocated labor divided by total sales.

OHPARAR - Unallocated overhead per square feet.

ADEMPSAL - Adjusted employee salary.

* In the regression, these variables are in thousands.

EXHIBIT 16

EXHIBIT 14

KENTUCKY PHARMACIES

Calculation of Container Cost Per Rx

<u>Dry</u>	<u>Utilization</u>	<u>Cost</u>	<u>Extended</u>
6 dr.	10%	\$ 0.075	\$ 0.0075
8 dr.	25%	0.087	0.0218
12 dr.	15%	0.110	0.0165
16 dr.	15%	0.125	0.0187
20 dr.	15%	0.165	0.0248
30 dr.	10%	0.202	0.0202
40 dr.	10%	0.240	0.0240
			\$ 0.1336
<u>Liquid</u>			
2 oz.	10%	0.249	0.0249
3 oz.	5%	0.294	0.0147
4 oz.	60%	0.339	0.2036
6 oz.	10%	0.388	0.0388
8 oz.	10%	0.443	0.0443
16 oz.	5%	0.592	0.0296
			\$ 0.3560
<u>Dry</u>	0.1336	×	85% = 0.1135
<u>Liquid</u>	0.3560	×	15% = <u>0.0534</u>
	Average Container Cost/Rx		= 0.1669

18:17:42

ALLOCATED PHARMACY COSTS/PRESCRIPTION
SCHEDULE A07/06/98
PAGE 1

ASSIGNED NUMBER	FISCAL YEAR END	TOTAL RXS	RX	TOTAL	RATIO
7252	12/31/96	45,319	1,223,613	1,337,282	0.915
			COST GOODS SOLD	0	0.000
			FLOOR SPACE	420	0.215

***** EXPENSE STATEMENT *****

ALLOCATED

LINE DESCRIPTION	ORIGINAL	CODE	FACTOR	RX COST
5 DEPRECIATION	8,382	C	0.323	2,707
6 PERSONAL PROPERTY TAX	0	B	0.915	0
7 REAL ESTATE TAX	0	C	0.323	0
9 OTHER TAXES	423	B	0.915	387
10 RENT - BUILDING	22,705	C	0.323	7,334
11 RENT - EQUIPMENT AND OTHER	0	B	0.915	0
12 REPAIRS	1,343	C	0.323	434
13 INSURANCE	4,896	B	0.915	4,480
14 INTEREST	6,242	B	0.915	5,711
15 LEGAL AND PROFESSIONAL FEES	5,350	B	0.915	4,895
16 RX - DUES AND PUBLICATIONS	1,075	A	1.000	1,075
17 OTHER DUES AND PUBLICATIONS	0	B	0.915	0
18 BAD DEBTS	0	K	0.000	0
20 TELEPHONE	3,771	B	0.915	3,450
21 HEAT, WATER, LIGHTS	6,608	C	0.323	2,134
22 OPERATING AND OFFICE SUPPLIES	3,335	B	0.915	3,052
23 ADVERTISING	0	K	0.000	0
24 RX - COMPUTER EXPENSES	16,971	A	1.000	16,971
25 RX - DELIVERY EXPENSES	5,673	A	1.000	5,673
26 RX - CONTAINERS AND LABELS	7,528	H	0.167	7,568
27 OTHER	1,419	C	0.323	458
28 OTHER	962	A	1.000	962
29 OTHER	2,398	B	0.915	2,194

TOTAL ALLOCATED RX OVERHEAD 69,485

	SALARIES	%	% RX		
	BENEFITS	CODE	RXS	TIME	
45 OWNER LICENSED PHARMACIST	64,238	D	40	89	51,094
46 EMPLOYEE PHARMACISTS	52,468	G	60	100	52,468
47 OWNER NOT LICENSED PHARMACIST	2,905	E		100	2,905
48 ALL OTHER RX EMPLOYEES	47,144	F		83	38,394
49 ALL OTHER EMPLOYEES	9,609				

SALES ADJUSTMENT FOR LABOR

TOTAL ALLOCATED LABOR COST	145,361
TOTAL ALLOCATED COST (OVERHEAD AND LABOR)	214,846

	OVERHEAD	LABOR	TOTAL
COST PER RX	1.53	3.21	4.74
INFLATED COST PER RX	1.57	3.30	4.67

DRAFT

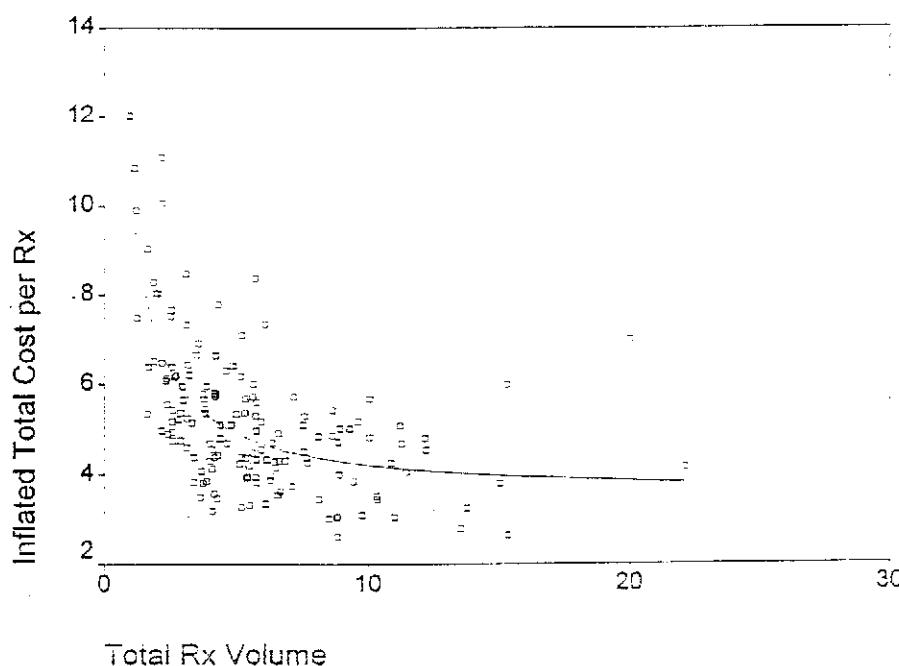
EXHIBIT 16

KENTUCKY PHARMACIES
Explanation of Schedule A Allocation Codes

<u>Code</u>	<u>Explanation of Allocations</u>
A	100% allocation to prescription costs.
B	Ratio of prescription sales to total sales.
C	1.5 times the ratio of prescription area to total store area not to exceed the sales ratio.
D	<u>Line 45:</u> Total salaries and benefits times adjusted percent of prescription time* limited to that amount greater than or equal to \$2,077 times the total prescriptions filled by the owner pharmacist(s) plus \$2,990 and less than or equal to \$2,077 times the number of prescriptions filled by the owner pharmacist(s) plus \$13,443.
E	<u>Line 47:</u> Total salaries and benefits times the reported percent of prescription time ($\%_R$) limited to that amount greater than or equal to \$10,000 times $\%_R$ times the full time equivalent factor and less than or equal to \$20,000 times $\%_R$ times the full time equivalent factor.
F	<u>Line 48:</u> Total salaries and benefits times the reported percent of prescription time ($\%_R$).
G	<u>Line 46:</u> Total salaries and benefits times the adjusted percent of prescription time ($\%_A$)*.
H	<u>Line 26:</u> Total number of prescriptions dispensed times \$.167 per prescription.

* Adjusted percent of prescription time ($\%_A$) is computed by taking the percent of Rx Time (Rx Time divided by Total Time) and multiplying this by two. This figure is then divided by one plus the percent of Rx time.

Plot of INTCRX with TOTRXVOL



Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
INTCRX	153	2.61	12.02	5.2363	3.6600
TOTRXVOL	153	.92910	22.09340	5.7550000	3.5459438
Valid N (listwise)	153				

Model Summary

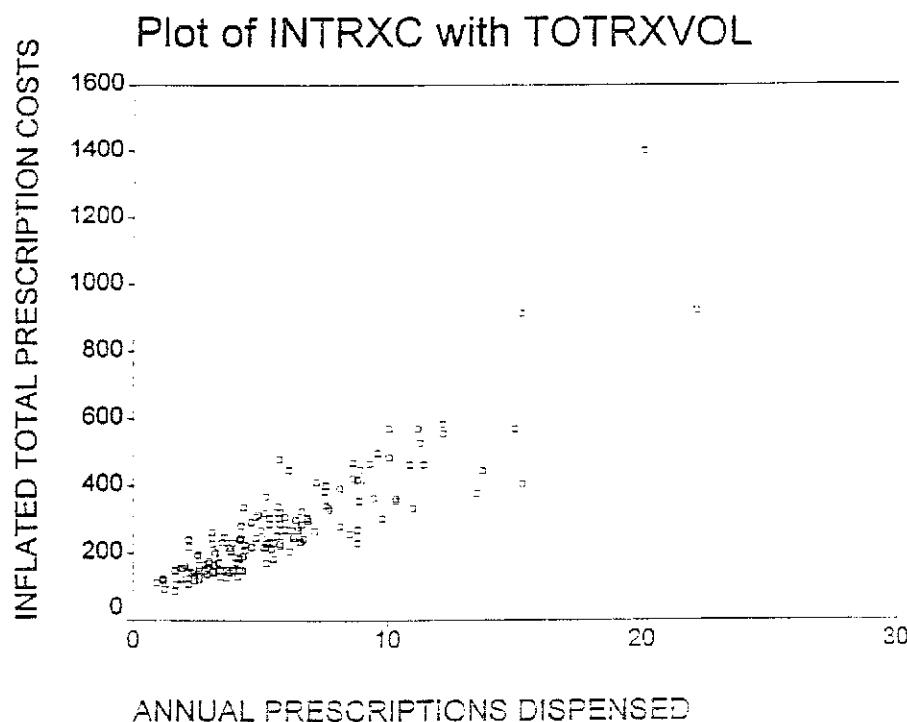
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.445 ^a	.198	.193	1.4915

a. Predictors: (Constant), TOTRXVOL

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	6.436	.231	27.918	.000
	TOTRXVOL	-.208	.034	-.445	.000

a. Dependent Variable: INTCRX

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
INTRXC	153	87.10700	1400.5450	275.56690	164.24628
TOTRXVOL	153	.92910	22.09340	5.7590000	3.5459438
Valid N (listwise)	153				

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.370 ^a	.753	.736	181.121685

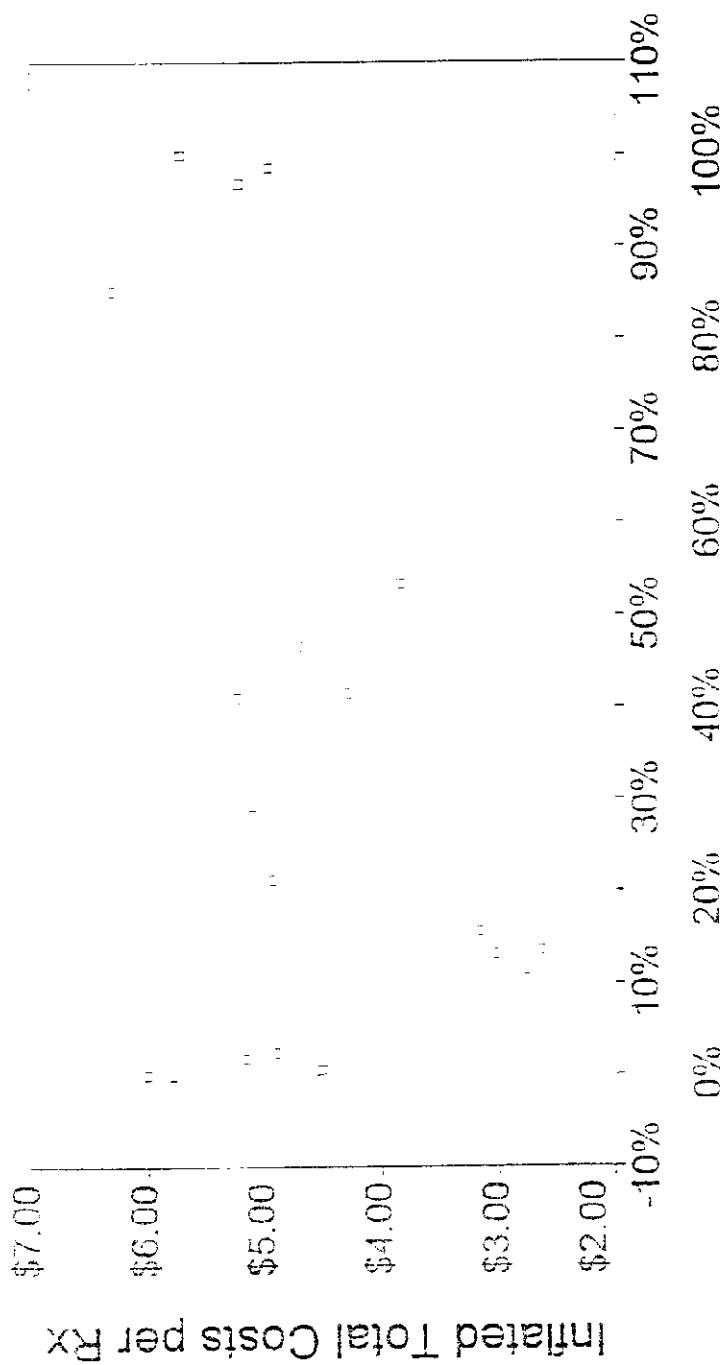
a. Predictors: (Constant), TOTRXVOL

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	43.374	12.538	3.459	.001
	TOTRXVOL	40.318	1.856	.870	21.723

a. Dependent Variable: INTRXC

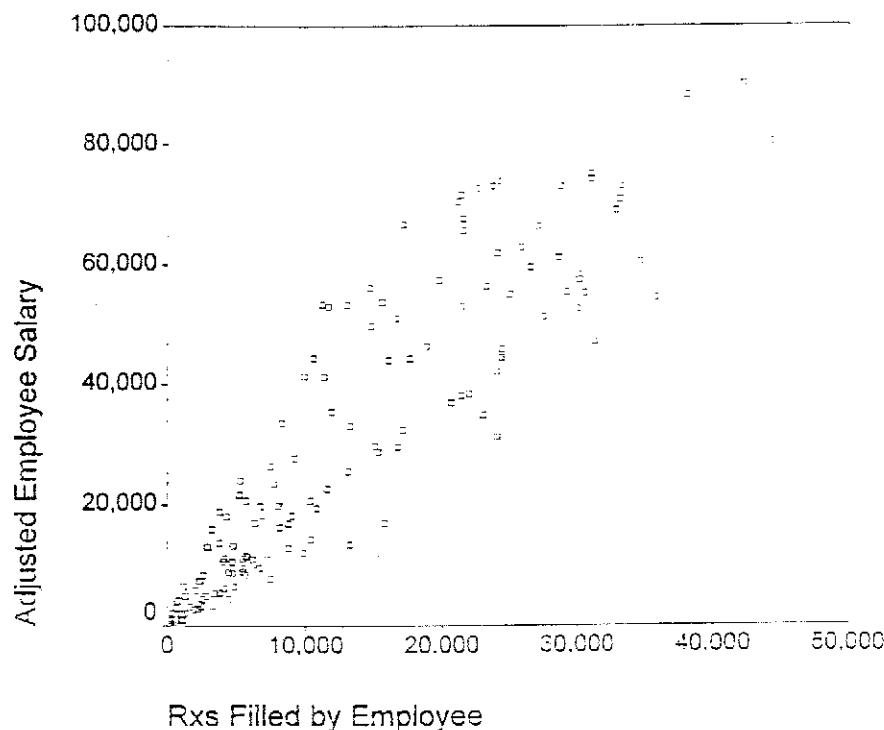
Dispensing Cost with LTC Percentage for LTC Pharmacies (excluding IV)



Medicaid LTC Rx as % of Total Medicaid Rx

r squared = .106

Employee Pharmacists Salaries Regression (Non-Chain Pharmacies Only)



Model Summary

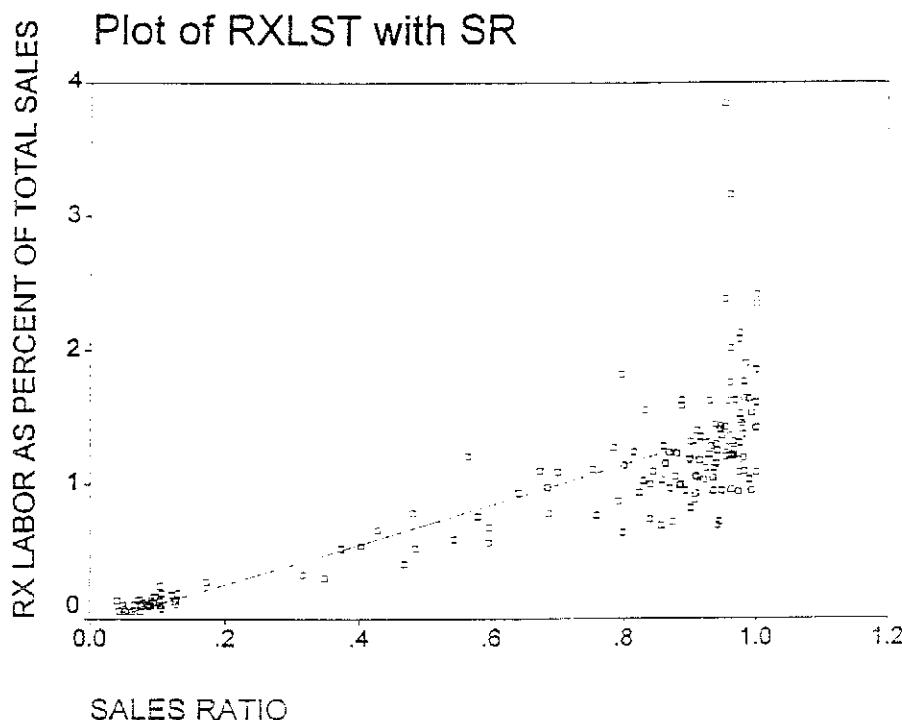
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.914 ^a	.835	.834	10,453.40

a. Predictors: (Constant), EMPRXS

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta		
1	(Constant) 2989.996	1278.972		2.338	.021
	EMPRXS 2.077	.075	.914	27.363	.000

a. Dependent Variable: ADEMPSAL



Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
RXLST	153	.05	3.84	.9868	.6368
SR	153	.041	1.000	.69649	.34919
Valid N (listwise)	153				

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.807 ^a	.652	.650	.3769

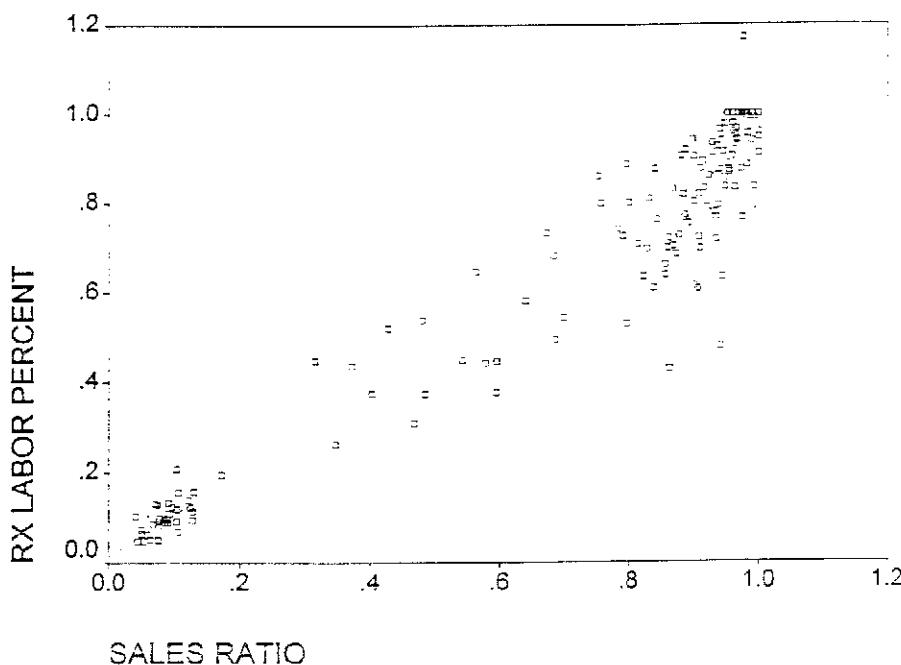
a. Predictors: (Constant), SR

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant) -3.886E-02	.068		-.570	.569
	SR 1.473	.088	.807	16.821	.000

a. Dependent Variable: RXLST

Plot of RXLLT with SR



Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
RXLLT	153	.048	1.171	.64998	.33315
SR	153	.041	1.000	.69649	.34919
Valid N (listwise)	153				

Model Summary

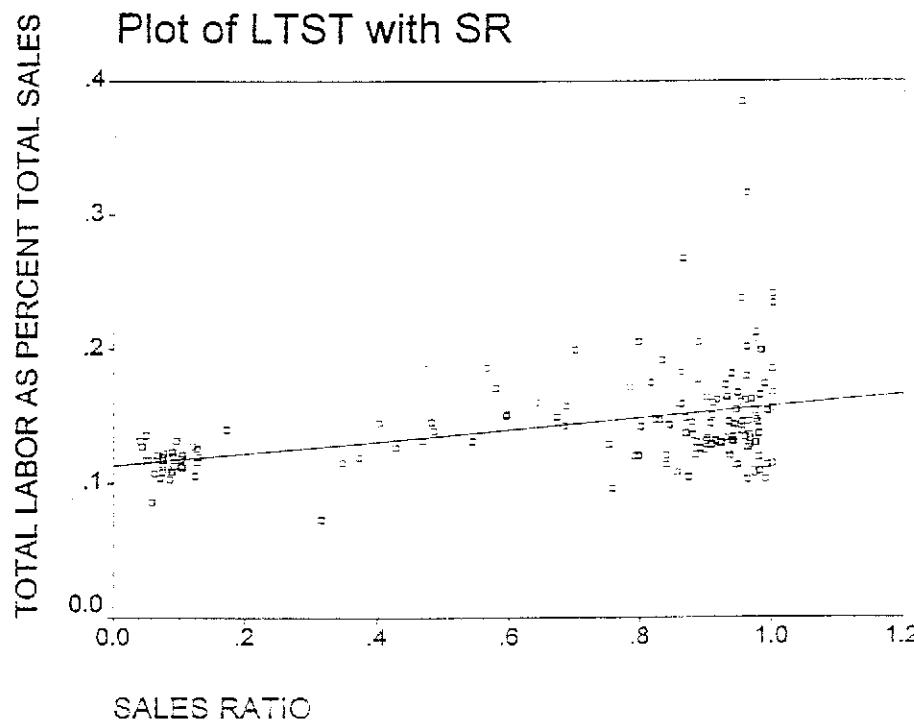
Model	R	R Square	Adjusted	Std. Error of the Estimate
			R Square	
1	.956 ^a	.914	.914	.7919E-02

a. Predictors: (Constant), SR

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	1.465E-02	.018	.627	.409
	SR	.912	.023	.956	40.105

a. Dependent Variable: RXLLT

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
LTST	153	.07	.38	.1439	3.966E-02
SR	153	.041	1.000	.59649	.34919
Valid N (listwise)	153				

Model Summary

Model	R	R Square	Adjusted R Square	Sta. Error of the Estimate
1	.391 ^a	.153	.147	3.662E-02

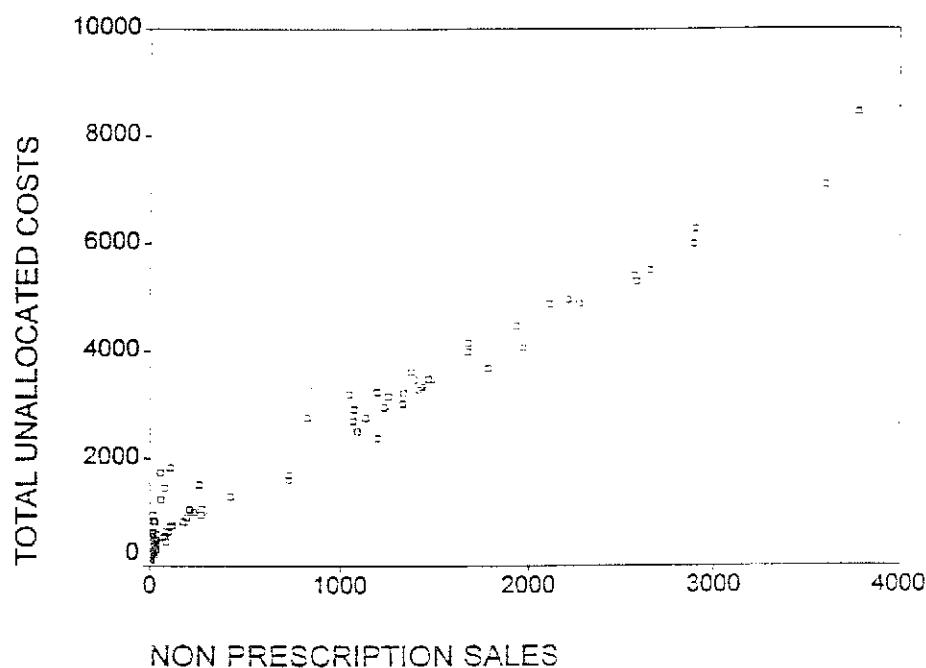
a. Predictors: (Constant), SR

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant) .113	.007		17.064	.000
	SR 4.439E-02	.009	.391	5.219	.000

a. Dependent Variable: LTST

Plot of TOTEXP with NONRXSAL



NON PRESCRIPTION SALES

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TOTEXP	153	106.02	8427.70	1208.8199	1653.1880
NONRXSAL	153	.00000	3776.4505	412.18800	797.99335
Valid N (listwise)	153				

Model Summary

Model	R	R Square	Adjusted	Std. Error of the Estimate
			R Square	
1	.986 ^a	.972	.972	275.3257

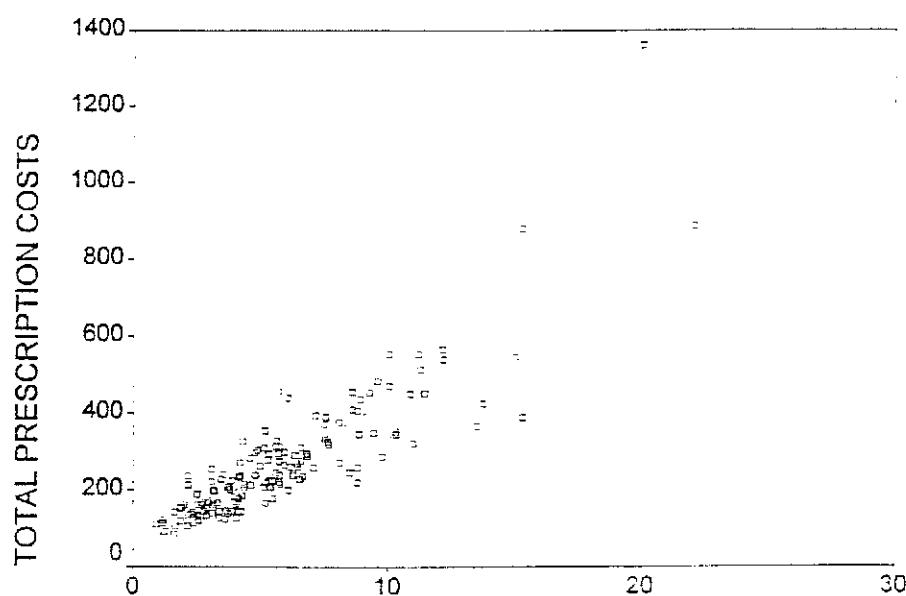
a. Predictors: (Constant), NONRXSAL

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	366.744	25.070		14.629	.000
1	NONRXSAL	2.043	.028	.986	73.001	.000

a. Dependent Variable: TOTEXP

Plot of TRXCOSTS with TOTRXVOL



ANNUAL PRESCRIPTIONS DISPENSED

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TRXCOSTS	153	84.66200	1361.0740	267.35544	159.01313
TOTRXVOL	153	.92910	22.09340	5.7590000	3.5459438
Valid N (listwise)	153				

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.869 ^a	.753	.753	79.043464

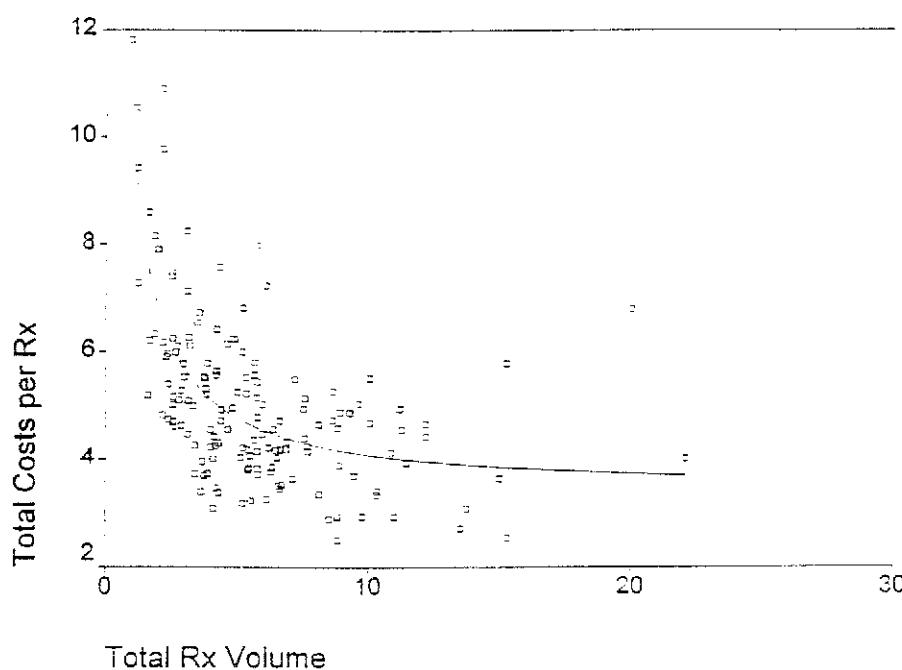
a. Predictors: (Constant), TOTRXVOL

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	43.026	12.217	3.522	.001
	TOTRXVOL	38.953	1.803	.869	.000

a. Dependent Variable: TRXCOSTS

Plot of TCPERRX with TOTRXVOL



Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TCPERRX	153	2.50	11.81	5.0852	1.6188
TOTRXVOL	153	.92910	22.09340	5.7590000	3.5459438
Valid N (listwise)	153				

Model Summary

Model	R	R Square	Adjusted R Square	Sta. Error of the Estimate
1	.448 ^a	.200	.195	1.4524

a. Predictors: (Constant), TOTRXVOL

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	6.262	.224	27.894	.000
	TOTRXVOL	-.204	.033	-.448	.000

a. Dependent Variable: TCPERRX



CABINET FOR HEALTH SERVICES
COMMONWEALTH OF KENTUCKY
FRANKFORT, 40621-0001

DEPARTMENT FOR MEDICAID SERVICES
"An Equal Opportunity Employer M/F/D"

April 3, 1998

Dear Pharmacist:

In conjunction with the Kentucky Medicaid Dispensing Fee Survey, a study is being conducted of prescription drug acquisition costs. Your pharmacy has been selected to participate in this study.

For this study we require a copy of the following information:

- All drug purchase invoices from your wholesale drug supplier(s) for the dates, May 1, 1997 through May 31, 1997.
- All invoices for direct purchases from brand name as well as generic pharmaceutical manufacturers and/or suppliers for the dates, May 1, 1997 through May 31, 1997.
- The due date for submission of invoices included in the survey sample is April 22, 1998.
Data should be submitted to:

Myers and Stauffer LC
Certified Public Accountants
4123 SW Gage Center Drive, Suite 200
Topeka, KS 66604-1833

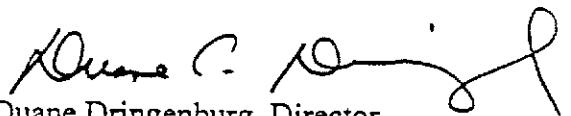
The submitted documents will not be returned to you, so we do suggest you send copies instead of originals.

If you have any questions regarding the sample data requested, please contact Marilyn Cozad with Myers and Stauffer at 1-800-255-2309.

April 3, 1998
Page two

Thank you for your assistance in the Dispensing Fee survey as well as in this study.

Sincerely,



Duane C. Dringenburg
Duane Dringenburg, Director
Division of Individual and Clinic Providers

DD:tp

KENTUCKY PHARMACIES

List of Tables

Table 1	Total Cost Per Prescription by Services Provided - Cost Adjusted to December 1997
Table 2	Total Cost Per Prescription - Cost Adjusted to December 1997
Table 3	Total Operating Cost Per Prescription By Prescription Volume - Cost Adjusted to December 1997
Table 4-A	Regression Summary - Dependent Variable: Inflated Total Cost Per Prescription
Table 4-B	Regression Summary - Dependent Variable: Inflated Total Prescription Costs
Table 5	Total Cost Per Prescription - Unadjusted Data
Table 6	Total Operating Cost Per Prescription by Ownership - Cost Adjusted to December 1997
Table 7	Total Operating Cost Per Prescription by Affiliation - Cost Adjusted to December 1997
Table 8	Total Cost Per Prescription by Services Provided - Cost Adjusted to December 1997, Weighted by Medicaid Volume
Table 9	Total Cost Per Prescription by Services Provided - Cost Adjusted to December 1997, Weighted by Prescription Volume
Table 10	Actual Acquisition Cost (AAC) as Percent of Average Wholesale Price (AWP) - Individual Store Means - Wholesale Purchases

Table 1

KENTUCKY PHARMACIES

Cost Adjusted to December 1997

Total Cost Per Prescription by Services Provided

<u>Percentiles</u>	<u>IV Therapy</u>	<u>Unit Dose Excluding IV Therapy</u>	<u>All Other</u>	<u>All</u>
90	\$8.38	\$6.48	\$7.79	\$7.35
80	6.99	6.18	6.20	6.21
70	6.13	5.67	5.42	5.72
60	5.99	5.17	5.08	5.30
50	5.67	4.94	4.80	4.94
40	5.65	4.68	4.48	4.60
30	5.60	4.25	4.31	4.31
20	4.44	3.95	3.83	3.94
10	4.33	3.32	3.49	3.47
Median weighted by Medicaid Rx's	6.22	4.30	4.36	4.54
Median weighted by total Rx's	6.13	4.30	4.54	4.70
Mean weighted by Medicaid Rx's				4.90
Mean weighted by total Rx's				4.89
Unweighted mean	6.28	5.03	5.24	5.24
Number of pharmacies	12	60	82	154

Prepared without audit by Myers and Stauffer LC
 Certified Public Accountants, Topeka, Kansas.

Source: Schedule B, December 1997, for the 154 responding pharmacies
 with fiscal years ending on or before September 30, 1997.

Table 2

KENTUCKY PHARMACIES

Cost Adjusted to December 1997

Total Cost Per Prescription

<u>Percentiles</u>	<u>Labor</u>	<u>Overhead</u>	<u>Total</u>
90	\$5.28	\$2.33	\$7.35
80	4.47	1.88	6.21
70	4.11	1.69	5.72
60	3.70	1.53	5.30
50	3.48	1.38	4.94
40	3.26	1.22	4.60
30	3.04	1.14	4.31
20	2.81	0.98	3.94
10	2.46	0.81	3.47
Mean Weighted by Medicaid Rx's	3.48	1.42	4.90
Mean Weighted by Total Rx's	3.46	1.43	4.89
Unweighted Mean	3.72	1.52	5.24
Number of Pharmacies	154	154	154

Prepared without audit by Myers and Stauffer LC
 Certified Public Accountants, Topeka, Kansas.

Source: Schedule D, December 1997, for the 154 responding pharmacies
 with fiscal years ending on or before September 30, 1997.

TABLE 3

KENTUCKY PHARMICIES

Cost Adjusted to December 1997

Total Operating Cost Per Prescription
By Prescription Volume

<u>Percentiles</u>	<u>20,000 & under</u>	<u>20,001-30,000</u>	<u>30,001-40,000</u>	<u>40,001- & Above</u>	<u>All Pharmacies</u>
90	\$10.85	\$8.03	\$6.92	\$6.18	\$7.35
80	9.90	6.48	6.44	5.60	6.21
70	9.03	6.20	5.79	5.10	5.72
60	8.28	6.13	5.46	4.80	5.30
50	8.04	5.95	5.24	4.48	4.94
40	7.49	5.42	4.69	4.31	4.60
30	6.52	5.22	4.38	4.00	4.31
20	6.39	4.97	3.85	3.62	3.94
10	5.34	4.75	3.81	3.28	3.47
Mean Weighted by Medicaid Rx's	7.86	6.01	5.13	4.67	4.90
Mean Weighted by Total Rx's	8.07	6.19	5.30	4.69	4.89
Unweighted Mean	8.38	6.28	5.35	4.66	5.24
Number of Pharmaci	10	23	22	99	154

Prepared without audit by Myers and Stauffer LC
Certified Public Accountants, Topeka, Kansas.

Source: Schedule D, June 1998, for the 154 responding pharmacies with fiscal years ending on or before September 30, 1997.

Table 4-A

KENTUCKY PHARMACIES

Regression Summary

Dependent Variable: Inflated Total Cost per Prescription

<u>Step Number</u>	<u>Independent Variable Entered</u>	<u>Coefficient</u>	<u>R²</u>	<u>Increase in R²</u>	<u>F to Enter</u>
0	Y-Intercept	4.7030			
1	RECIPMED	0.2150	0.163	0.163	29.649
2	DELPER	0.0170	0.248	0.085	24.859
3	TOTRXVOL	-0.0689	0.293	0.045	20.727
4	TPN	1.1500	0.318	0.025	17.395

Prepared without audit by Myers and Stauffer LC
 Certified Public Accountants, Topeka, Kansas.

Source: Regression Analysis. Schedule F, dated July 1998.

Table 4-B

KENTUCKY PHARMACIES

Regression Summary

Dependent Variable: Inflated Total Prescription Costs

<u>Step Number</u>	<u>Independent Variable Entered</u>	<u>Coefficient</u>	<u>R²</u>	<u>Increase in R²</u>	<u>F to Enter</u>
0	Y-Intercept	2401.7890			
1	TOTRXVOL	53.7800	0.912	0.912	1575.780
2	DELPER *		0.923	0.011	910.509
3	RECIPMED	9.0880	0.933	0.010	693.929
4	TPN	83.0470	0.936	0.003	544.275
5	XCDUNDOSE	74.021	0.938	0.002	447.485
6	FYE	-2412.886	0.940	0.002	384.938
7	PERLTCRX	1.415	0.942	0.002	340.520
8	DELPER *		0.941	-0.001	
9	UNIDOS	-54.056	0.943	0.002	344.273
10	DELPER *	0.954	0.945	0.002	311.125

* Variable removed at Step 8, and re-introduced at Step 10.

Prepared without audit by Myers and Stauffer LC
Certified Public Accountants, Topeka, Kansas.

Source: Regression Analysis. Schedule F, dated July 1998.

TABLE 5

KENTUCKY PHARMACIES

Unadjusted Data

Total Cost Per Prescription

<u>Percentiles</u>	<u>Labor</u>	<u>Overhead</u>	<u>Total</u>
90	\$5.13	\$2.26	\$7.23
80	4.35	1.84	6.10
70	3.99	1.64	5.53
60	3.62	1.49	5.15
50	3.36	1.34	4.75
40	3.17	1.19	4.47
30	2.94	1.11	4.18
20	2.73	0.95	3.83
10	2.39	0.79	3.38
Mean Weighted by Medicaid Rx's	3.37	1.38	4.75
Mean Weighted by Total Rx's	3.35	1.39	4.74
Unweighted Mean	3.62	1.48	5.09
Number of Pharmacie	154	154	154

Prepared without audit by Myers and Stauffer LC
 Certified Public Accountants, Topeka, Kansas.

Source: Schedule D, June 1998, for the 154 responding pharmacies
 with fiscal years ending on or before September 30, 1997.

TABLE 6

KENTUCKY PHARMACIES

Cost Adjusted to December 1997

Total Operating Cost Per Prescription by Ownership

<u>Percentiles</u>	<u>Individual & Partnership</u>	<u>Corporation</u>	<u>All Pharmacies</u>
90	\$5.95	\$7.35	\$7.35
80	5.60	6.22	6.21
70	5.34	5.72	5.72
60	4.60	5.30	5.30
50	4.38	4.97	4.94
40	4.38	4.69	4.60
30	4.30	4.31	4.31
20	3.95	3.92	3.94
10	3.57	3.45	3.47
Mean Weighted by Medicaid Rx's	4.50	4.92	4.90
Mean Weighted by Total Rx's	4.71	4.89	4.89
Unweighted Mean	4.96	5.26	5.24
Number of Pharmaci	10	144	154

Prepared without audit by Myers and Stauffer LC
 Certified Public Accountants, Topeka, Kansas.

Source: Schedule D, June 1998, for the 154 responding pharmacies with fiscal years ending on or before September 30, 1997.

TABLE 7

KENTUCKY PHARMACIES

Cost Adjusted to December 1997

Total Operating Cost
Per Prescription by Affiliation

<u>Percentiles</u>	<u>Independent</u>	<u>Chain</u>	<u>All Pharmacies</u>
90	\$ 6.65	\$ 7.79	\$ 7.35
80	6.17	6.22	6.21
70	5.72	5.68	5.72
60	5.24	5.34	5.30
50	4.94	4.97	4.94
40	4.55	4.72	4.60
30	4.29	4.36	4.31
20	3.95	3.83	3.94
10	3.51	3.47	3.47
Mean Weighted by Medicaid Rx's	4.94	4.68	4.90
Mean Weighted by Total Rx's	4.79	5.00	4.89
Unweighted Mean	5.18	5.35	5.24
Number of Pharmaci	95	59	154

Prepared without audit by Myers and Stauffer LC
Certified Public Accountants, Topeka, Kansas.

Source: Schedule D, June 1998, for the 154 responding pharmacies with fiscal years ending on or before September 30, 1997.

Table 8

KENTUCKY PHARMACIES

Cost Adjusted to December 1997, Weighted by Medicaid Volume

Total Cost Per Prescription by Services Provided

<u>Percentiles</u>	<u>IV Therapy</u>	<u>Unit Dose Excluding IV Therapy</u>	<u>All Other</u>	<u>All</u>
90	\$6.99	\$6.39	\$6.17	\$6.99
80	6.99	5.72	5.34	6.13
70	6.99	5.17	4.69	5.60
60	6.99	4.70	4.43	5.01
50	6.22	4.31	4.36	4.55
40	5.99	4.25	4.15	4.30
30	5.99	3.97	3.83	4.15
20	5.10	3.51	3.62	3.83
10	4.44	3.04	3.24	3.24
Median weighted by total Rx's	6.22	4.31	4.54	4.72
Unweighted median	5.67	4.94	4.80	4.94
Mean weighted by Medicaid Rx's				4.90
Mean weighted by total Rx's				4.89
Unweighted mean	6.28	5.03	5.24	5.24
Number of pharmacies	12	60	82	154

Prepared without audit by Myers and Stauffer LC
Certified Public Accountants, Topeka, Kansas.

Source: Schedule D, December 1997, for the 154 responding pharmacies
with fiscal years ending on or before September 30, 1997.

Table 9

KENTUCKY PHARMACIES

Cost Adjusted to December 1997, Weighted by Prescription Volume

Total Cost Per Prescription by Services Provided

<u>Percentiles</u>	<u>IV Therapy</u>	<u>Unit Dose Excluding IV Therapy</u>	<u>All Other</u>	<u>All</u>
90	\$6.99	\$6.31	\$6.20	\$6.41
80	6.22	5.67	5.37	6.08
70	6.22	5.17	5.02	5.42
60	6.22	4.70	4.80	5.08
50	6.22	4.31	4.54	4.72
40	6.22	4.19	4.33	4.37
30	5.99	3.97	3.88	4.15
20	5.67	3.45	3.74	3.79
10	5.10	3.09	3.24	3.28
Median weighted by Medicaid Rx's	6.22	4.31	4.36	4.55
Unweighted median	5.67	4.94	4.80	4.94
Mean weighted by Medicaid Rx's				4.90
Mean weighted by total Rx's				4.89
Unweighted mean	6.28	5.03	5.24	5.24
Number of pharmacies	12	60	82	154

Prepared without audit by Myers and Stauffer LC
Certified Public Accountants, Topeka, Kansas.

Source: Schedule D, December 1997, for the 154 responding pharmacies
with fiscal years ending on or before September 30, 1997.

Table 10

KENTUCKY PHARMACIES

Actual Acquisition Cost (AAC) as Percent of Average Wholesale Price (AWP)

Individual Store Means - Wholesale Purchases

<u>Percentiles</u>	<u>MAC Drugs</u>	<u>Non-Mac</u>	<u>All Drugs</u>
90	\$38.59	\$84.33	\$74.11
80	27.04	81.55	71.68
70	26.98	81.51	70.86
60	25.53	80.86	70.66
50	25.28	80.31	70.20
40	24.38	79.44	68.94
30	24.30	79.32	68.51
20	24.23	78.80	68.12
10	20.30	77.44	64.16

Prepared without audit by Myers and Stauffer LC
 Certified Public Accountants, Topeka, Kansas.

Source: Schedule H, July 1998.

E. Findings

The following table summarizes the findings of our dispensing cost study:

Inflated Dispensing Cost¹ for Kentucky Pharmacies

	All	IV Therapy Providers	All Other	Excluding IV Therapy	
				Unit Dose	Non-Unit Dose
Number	154	12	142	60	82
Unweighted Mean	5.24	6.28	5.16	5.03	5.24
Weighted Median ²	4.54	6.22	4.31	4.30	4.36
25 th Percentile ²	3.94	5.60	3.83	3.92	3.81

¹Excluding \$0.25 state tax.

²Weighted by Medicaid volume.

Our analysis indicates that the costs associated with dispensing intravenous (IV) solutions are not representative of the costs that are incurred by most retail pharmacies dispensing to outpatient and long term care facility patients. Excluding the pharmacies with an IV therapy focus, the median cost of dispensing a Medicaid prescription in Kentucky is \$4.62 (\$4.37 plus the \$0.25 state tax). This is inclusive of both ambulatory and long term pharmacies, and is less than the State's current dispensing fee allowance of \$4.75 for ambulatory patients and \$5.75 for long term care facility dispensing.

As shown in the above table, a significant result of this study is the finding that there is apparently no cost differential associated with dispensing prescriptions in unit dose packaging, nor were there cost differentials associated with other measures of long term care dispensing activity (see Exhibit 17-C). Another pharmacy characteristic found to be unrelated to cost per dispensing was chain versus non-chain affiliation status.

The study did disclose that dispensing of intravenous (IV) solutions was associated with increased costs, relative to the more "normal" ambulatory and nursing home dispensing activities. In the case of pharmacies with a focus on IV services, additional compensation is received for the home nursing services required to administer the IV solutions, and therefore the dispensing fee may be a less important component of overall Medicaid reimbursement.

We found that Kentucky pharmacies, excluding those with IV therapy sales, had average dispensing costs ranging from \$2.61 per prescription to \$12.02 per prescription. One-quarter of all Medicaid prescriptions were filled by pharmacies with an average dispensing cost of \$3.83 or